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Curriculum Study, Grades IV, V and VI

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PREFACE

This monograph is the seventh in a series of publications dealing with methods of educating the blind.

The first part presents a careful study of the curriculum of the New York Institute for Grades IV, V and VI with a comparison of curricula from other blind schools and public schools. Teachers and administrators should find in Dr. Athearn's study a major contribution to the field of curricula analysis.

Dr. Athearn is director of educational research at the New York Institute for the Education of the Blind and comes to the field of the blind with wide experience in college and secondary school teaching, much research experience, and a great deal of writing to his credit. His study should prove of value because of his wide experience and knowledge of curricula construction.

The second part by Miss Emily F. Ellis, A.M., deals with the curriculum of the third grade and presents a third grade project. Teachers of elementary children should find this study of use in their own classroom work.

Miss Ellis has had much experience in the teaching field. She is a graduate of Mount Holyoke College and holds an M.A. degree from the University of Chicago. For five years Miss Ellis taught in the Riverside Church in New York City. For four years she was in charge of girls' clubs and all dramatics in the Nassau Industrial School.

Miss Ellis' previous publications include articles in the Pilgrim Elementary Teacher, Pilgrim Press, Boston: "A Second Grade Study of Indian Customs and Religion," November, 1934; "How the Second Grade Studied Work With the Blind," April, 1935; "Changing Habits of Worship," October, 1935; and "Fifth Graders Discuss Religion of Yesterday and Today," June, 1936. A fifth grade unit, "The Life and Religion of the Early Hebrews," was published by the Beacon Press, Boston, in their series on Religious Education, in 1935.

M.E. FRAMPTON, Principal
The New York Institute for the
Education of the Blind

October, 1937

N. Y. I. E. B.

OUTLINE OF COURSES OF STUDY

****

Fourth, Fifth, and Sixth Grades

READING IV

OBJECTIVES:

General (From the 24th Yearbook, Part I)

1. "To provide rich and varied experiences in practically every field of thought and activity for which pupils are prepared, such as history, biography, geography, travel, science, art, recreation and literature.

2. "To promote rapid growth in habits of intelligent interpretation."

Specific

1. To develop ability to grasp organization of what is read.

2. To increase ability to find important points and support details.

3. To read effectively and with expression and proper grouping of words into phrases.

4. To develop habits of reading effectively in order to find answers to questions.

5. To develop ability to remember what is read and to reproduce it.

6. To improve technique and mechanics of reading.

7. To discover inter-relation of subjects with one another, e.g. Geography and Literature.

8. To develop ability to make intelligent use of glossary in discovering meanings of words.

9. To drill in oral reading at sight.

TEXT-BOOKS:

Elson Basic Reader, Book Four, by William H. Elson, William S. Gray
Scott, Foresman & Company, New York, 1931

Child's World, by W. K. Tate, Sara Withers, & Hetty S. Browne, Johnson Publishing Co., Richmond, 1920.

SUPPLEMENTARY TEXTS: (Used by Teacher)

The Junior Book of Authors, Ed. by Stanley J. Kunitz and Howard Haycraft, H. W. Wilson Co., New York, 1934

See also Language Book and Apparatus Report, some of same books read in Reading period.

OTHER TEACHING AIDS:

"Class Library."
Pupils' own library books.

ARITHMETIC IV

GENERAL OBJECTIVES: (From Course of Study for the Elementary Schools)

1. To strengthen by practice the work of the last year in the fundamental processes.

2. To master more difficult multiplication, and long division.

3. To maintain, extend and make more permanent the skills developed in former grades.

4. To increase ability to solve two-step problems of fourth grade ability.

5. To establish the habit of checking results.

6. To enlarge the appreciation of arithmetic in its practical application.

7. To develop accuracy and agility in solving long division problems.

8. To drill pupils in definitions of terms.

9. To learn to formulate problems from facts given.

10. To learn to prove multiplication problems.

PROCEDURES:

1. Rapid mental work involving the fundamental operations. Oral drill.

2. Oral recitation of tables by those especially weak.

3. Pupils copy problems from dictation.

4. Slate work for accuracy, not speed.

5. Supervise individual difficulties.

6. Prove all problems.

7. Class divided into three groups, on basis of ability.

ARITHMETIC IV (Continued)

8. Transfer answers from type slate to Braille slate.

9. Drill in writing figures on Braille slates.

10. Coach pupils weak in type work.

TEXT-BOOKS:

(Watson, Bruce M. — Modern Arithmetic Primary
D. C. Heath & Co., New York,
(White, Charles E. — 1918-and-1922.
Used by 3 pupils only

SUPPLEMENTARY TEXTS:

OTHER TEACHING AIDS:

Type, type slates, coins.

GEOGRAPHY IV

TEXT: Carpenter, "Our Neighbors Near and Far"

GENERAL OBJECTIVES:

1. To arouse a questioning attitude in the minds of the pupils in the presence of the problem.

2. To enable pupils to become acquainted with and in sympathy toward people of other lands by helping them to see why people work, live, and play.

3. To have pupils realize that people everywhere need food, clothing, shelter, means of communication, and transportation.

4. To give pupils some understanding of the size of the earth and a knowledge of its larger land masses, bodies of water, etc.

5. To associate geographic knowledge gained at home and at school and enlarge upon the same.

6. To teach the meaning of symbols used on maps and globes.

7. To teach pupils how to study geography rather than merely to acquire information.

OBJECTIVES:

1. To acquire some understanding of the life and habits of people living not far from us.

2. Study of comparative menus of different countries.

3. To develop a technique of study.

4. To learn to read to discover solutions to problems.

5. To learn how to read Braille maps.

6. To afford to the pupil an adequate general knowledge of the early history and development of civilization.

7. To gain a broad picture of the world and world events to the present day.

8. To develop a keener interest in world affairs.

9. To learn the meaning of symbols used on globes and maps.

PROCEDURES:

1. Make comparative charts.
2. Globe exercises.
3. Use of Braille maps.
4. Use of Planisphere.
5. General explanation and individual instruction.
6. Make Product maps in clay and plasticene.

TEXT-BOOKS:

Carpenter, Frances, Our Neighbors Near and Far, American Book Company, New York, 1933.

SUPPLEMENTARY TEXTS:

Haynes, Muriel, Our Changing World, ("Our Electric World"), Thomas Nelson and Sons, New York, 1934. (Used by teacher)

Hillyer, V. M., A Child's History of the World, The Century Company, New York, 1924. (Used by teacher and pupils)

Headland, Isaac Taylor, Home Life In China, Macmillan Company, New York, 1914.

Carpenter, Frank G. (New Geographical Reader,
("Europe," New York,
(Geographical Reader, Asia
(American Book Co., 1924.

OTHER TEACHING AIDS:

Relief map of Europe and Asia; Globe; Planisphere; Braille maps in text-books; Braille slates; Styluses.

SPELLING IV

GENERAL OBJECTIVES:

1. To develop a technique for the study of spelling.

2. To arouse a spelling conscience, an eagerness to spell correctly.

3. To inculcate a spelling consciousness, the ability to recognize instantly the correct and incorrect spelling.

4. To form the habit of correct spelling in all written work.

5. Accurate pronunciation of all words and ability to divide words into syllables.

6. To learn to build words from words already learned.

7. To learn to write Braille on Braille writers.

8. To develop a technique of studying spelling.

9. To learn to write more accurately and neatly on slates or Braille writers.

10. To learn to write Braille contractions on Braille writers.

11. To drill on spelling and writing in Braille 1½.

12. To learn to use the dictionary as an aid in developing a keener sense of the meaning and use of words.

13. To learn Braille syllabification.

14. To learn to appreciate the inter-relation of spelling to the other subjects.

PROCEDURES:

1. Children make own textbooks.

2. Play spelling games.

SPELLING AND WRITING IV

TEXT-BOOKS:

(Horn, Ernest
(Ashbough, Ernest J.
The Horn-Ashbough Fundamentals of Spelling, J. B. Lippincott Company, Philadelphia, 1928.
I-XIII Edition

SUPPLEMENTARY TEXTS:

Syllabus for Elementary Schools, "Spelling"
University of the State of New York Press,
1929. (By teacher)

OTHER TEACHING AIDS:

Braille slates, Styluses, Notebook covers.

LANGUAGE IV

GENERAL OBJECTIVES: (From "Course of Study for Elementary Schools)
For the Public Schools of Montana

I. Oral Composition

a. To strengthen the "Sentence Sense" and eliminate weak connectives.

b. To secure good bearing before the class through eliminating self-consciousness by establishing the right class atmosphere.

c. To continue to promote orderly talking.

d. To secure good articulation and good tone.

e. To correct, with moderation, common spoken errors.

f. To begin the study of the dictionary.

II. Writen Composition

a. To strengthen the sentence sense in the short paragrap

b. To give considerable practice in the writing of the short, familiar letter.

c. To drill on the words commonly misspelled and on common grammatical errors.

d. To secure mastery of the few technicalities noted, including quotations marks for the simple unbroken quotations.

e. To insist on neatness and good arrangement, in all written work.

PROCEDURE:

1. Language game.

2. Dramatization of stories.

3. Memorizing and reciting of poems.

TEXT-BOOKS:

No Braille Texts used: Ink print only.

Open Door Language Series - (Zenos Scott
(Randolph T. Conglan
(Harriet E. Peet
(Laura Frayee
First Book & Second Book, Houghton Mifflin Co., Cambridge, Mass., 1927.

SUPPLEMENTARY TEXTS:

All used by teacher.

Price, Olive, Short Plays from American History and Literature., J. J. Little and Ives Company, New York, 1925.

Person & Kirchiney, New Essentials of English Lower Grades, American Book Co., New York, 1928.

V. M. Hillyee, Child's History of the World, The Century Company, New York, 1924.

Mabie, Hamilton Wright, Ed., Myths Every Child Should Know

" " " " , Legends Every Child Should Know
Doubleday, Page, & Company, New York, 1913.

Driggs, Howard R., Live Language Lessons, University Publishing Co., New York, 1924.

Stevenson, R. L., A Child's Garden of Verses, Charles Scribner's Sons, New York, 1913.

Stories from the Classics, selected and arranged by Eva March Tappan, Houghton Mifflin Company, New York, 1907 (in "The Children's Hour" series)

Poems and Rhymes, selected and arranged by Eva March Tappan, Houghton Mifflin Company, New York, 1907.

Stories of Nature,

Carrol, Lewis, Alice's Adventures in Wonderland,
(Blue Ribbon Books, Inc., New York.
(The Cornwall Press

Harrington, Mildred P., Ring-A-Round, Macmillan Company, New York, 1930.

Bianco, Margery, The Good Friends, The Viking Press, New York, 1934

Magazines:

The Instructor, T. A. Owen Publishing Co., N.Y.
The Grade Teacher, Ed. by Florence Hale, The Educational Publishing Corp., New York
Child's Life, Rand McNally & Co., Chicago
Story Parade, published monthly at 70 Fifth Ave., New York

OTHER TEACHING AIDS:

Braille Slates, "Styluses", Notebook covers.

GRADE V

SPELLING

TEXTS USED:

Fundamentals of Spelling, E. Horn and E. Ashbaugh, 1928 Edition, J. B. Lippincott Company

Remedial Lessons in Spelling, N. H. Hall, 1929 Edition, Hall and McCreary Co. Chicago.

Lists of words from the Syllabus for Elementary Schools, 1929 Edition, Albany, The University of the State of New York Press.

Regents' Test Papers, 1933--34--35.

SUPPLEMENTARY TEXTS:

The Jones Complete Course in Spelling, W. F. Jones, 1924 Edition. Hall and McCreary Company.

Progress in Spelling, E. Horn and E. Ashbaugh, 1935 Edition, Lippincott Co.

Essentials of Spelling, H. Pearson and H. Suzzallo, 1927 Edition, American Book Co.

OTHER TEACHING AIDS: Braille writers, Braille slates, Styluses.

READING

TEXTS USED:

The Elson Basic Readers, Book Five, W. Elson and W. Gray, 1931 Edition, Scott, Foresman and Company.

The Elson Readers, Book Six, W. Elson and C. Keck, 1929 Edition, Scott, Foresman and Company.

SUPPLEMENTARY TEXTS:

The Work-Play Books, "Pleasant Lands," A. Gates and J. Ayer, 1935 Edition, The MacMillan Company.

Selections from Regents' Test Papers for practice in silent reading, 1932--33--34--35.

OTHER TEACHING AIDS:

Braille writers, Braille slates, Styluses.

LANGUAGE

TEXTS USED:

Live Language Lessons, H. B. Driggs, 1924 Edition, The University Publishing Company.

Everyday Readings, H. Pearson and C. Hunt, 1927 Edition, American Book Company.

One Hundred and One Famous Poems, Compiled by R. J. Cook, 1929 Edition, The Cable Company.

SUPPLEMENTARY TEXTS:

McFadden Language Series, E. B. McFadden, 1925 Edition, Rand McNally Company.

The Open Door Language Series, Scott, Congdon, Peet and Frazee, 1933 Edition, Houghton Mifflin Company.

Why the Chimes Rang, R. M. Alden, 1924 Edition, Bobbs-Merrill Company.

The Golden Windows, L. E. Richards, 1928 Edition, Little, Brown & Company.

The Chief American Poets, C. H. Page, 1931 Edition, Houghton Mifflin Company.

Fifty Famous Stories Retold, James Baldwin, 1905 Edition, American Book Company.

Thirty More Famous Stories Retold, James Baldwin, 1905 Edition, American Book Company.

✓ "Better Say," Corrective English, J. Fernald, 1930 Edition, Funk & Wagnalls.

Essentials of English Grammar, E. Gemmill, 1920 Edition, Harcourt, Brace & Howe, Inc.

OTHER TEACHING AIDS:

Braille writers, Braille slates, Styluses.

ARITHMETIC

TEXTS USED:

Modern Intermediate Arithmetic, B. Watson and C. White, 1922 Edition, Heath and Company.

SUPPLEMENTARY TEXTS:

Strayer-Upton Arithmetics, G. Strayer and C. Upton, 1928 Edition, American Book Company.

City Arithmetics, W. Boyland, F. Smith, 1926 Edition, Merrill Company.

Questions from Test Papers issued by the Regents, by public schools, and standard tests.

OTHER TEACHING AIDS:

Type and Slates, Braille Slates and Styluses.

GEOGRAPHY

TEXTS USED:

Our World and Ourselves, Our Home State and Continent, A.Brigham and C. McFarlane, 1933 Edition, American Book Company.

Pamphlet of maps and Text dealing with the United States, 1929 Edition, (Braille only), Embossed at the Illinois School for the Blind.

Pamphlet of maps and text dealing with the Americas, 1929 Edition, Embossed at the Jacksonville School for the Blind.

SUPPLEMENTARY TEXTS:

The Americas, W. Atwood and H. Thomas, 1934 Edition, Ginn and Company.

Atlas of the World, 1931 Edition, The World Syndicate Publishing Company.

Teacher's manual of the Cartocraft Globes, 1931 Edition, Denoyer-Geppert Company.

Geography By Grades, N. Niver, 1930 Edition, MacMillan Publishing Company.

Atlas of the United States, 1933 Edition, Rand McNally.

OTHER TEACHING AIDS:

Globe
Map of the United States
Map depicting the Eastern and Western Hemispheres
County Map of New York State
County Map of New Jersey
Card-board maps of New York, Canada, The United States, and the Americas.

TEXT BOOKS USED BY PUPILS OF GRADE VI

READERS:

Elson Basic Fifth, Elson & Gray, Scott, Foresman and Company, 1st Edition.

Literary World Sixth, Metcalf, Withers and Brown, Johnson Publishing Company, Richmond, Virginia, 1st Edition.

SPELLERS:

Graded School Speller, Part II, Spaulding & Miller, Ginn and Company, 2d Edition.

Remedial Lessons in Spelling, Norman Hall, McCreary & Company, Chicago, Illinois, 1st Edition.

GEOGRAPHY:

Our Continental Neighbors, Book Three, Bingham & McFarlane, American Book Company, 1st Edition.

LANGUAGE:

Live Language, Howard Driggs, University Publishing Co.

SUPPLEMENTARY TEXT BOOKS USED BY TEACHER

LANGUAGE:

New Essentials of English, Higher Grades, Pearson & Kirchwey, American Book Company, 2d Edition.

Longman's Briefer Grammar, George Smith, Longmans, Green & Company, Revised Edition, November, 1933.

DRILL BOOKS:

English Practice Book, Grade V, Browning and Wakle, American Book Company

English Drill Book, Mellie, John, Macmillan.

My Progressive Book in English, Part II, Grade 8, Helen Miller, Educational Printing House.

READING:

Odyssey for Boys and Girls, A. J. Church, Macmillan, 4th Edition.

The Chief Poets, Curtis H. Page, Houghton Mifflin, 1st Edition.

The Story of Mankind, Van Loon, Boni and Liveright, 25th Printing.

ARITHMETIC:

Smith's Applied Arithmetic, Lyons and Carnahan, 2d Edition.

Essentials of Arithmetic, Intermediate, Wentworth and Smith, Ginn & Co.

Everyday Arithmetic, Book III, Hoyt & Peet, Houghton Mifflin Company, 7th Impression.

GEOGRAPHY:

Advanced Geography, Part I, McMurry & Parkins, Macmillan

Carpenters Readers, American Book Co.

OTHER SCHOOLS FOR THE BLIND

Survey of 1924
(for A.A.I.B.)

Courses in 4th, 5th, and 6th Grades

The 1924 survey of Courses of Study in Schools for the Blind reported the practices of 31 schools.

The subjects most frequently reported for grades 4, 5, and 6 are as follows:

GRADE IV: In addition to the tool subjects, an increasing number of schools introduce into this grade, manual training, sewing, piano, vocal music, braille notation, hygiene and elementary history.

GRADE V: Required subjects in more than half the schools are: Reading, spelling, language, arithmetic, geography, history, hygiene, chorus, physical training, manual training.

When electives are added, more than half the schools offe piano and braille notation, knitting and chair caning in this grade.

GRADE VI: Typewriting is added to the above median subjects required in Grade V.

OVERBROOK

Fourth Grade

Spelling	175 minutes per week
Reading	150 " " "
Language	150 " " "
Arithmetic	225 " " "
Physiology	50 " " "
"The Game of Healthy Living" Winslow and Hahn	
Geography	150 minutes per week
Typewriting	150 " " "
Writing	100 " " "

WESTERN PENNSYLVANIA SCHOOL

Begins history in fourth grade.
First Book in American History, Beard & Bagley

NORTH CAROLINA STATE SCHOOL

Typewriting)
) introduced in fourth grade.
Physiology)

OUTLINE OF COURSE OF STUDY

PERKINS INSTITUTION: Fourth Grade: Unit on Norsemen. (Quoted from Syllabus)

"It is rather unfortunate that in this particular unit of conduct there is very little material in braille. This means that the teacher and others will have to put material in braille so that the children can actually get at things for themselves, for we do want to instill into them a desire to do things themselves. We also want to develop their abilities in the power of research at an early age.

"This unit can easily be brought down to the present time through the study of what these countries are like now and what they give to other countries. Perhaps the children will become so interested in the Norsemen that we will be able to keep on the unit throughout the year.... At any rate let us stop the unit when the children begin to show signs of weariness.

"The pageant of the Norsemen has real possibilities for we have a boat, a pond, beautiful grounds, and rather unusual settings.

"As one gets into the swing of this unit or any unit one sees more and more how all the subjects, except arithmetic may be correlated. English is adequately cared for both through oral and written work of all kinds. One may insist on 100% accuracy of a short spelling list and then add to that list the words used in a particular unit which will be met so many times that they will become a part of our written and spoken vocabulary. History and geography are well taken care of in this unit. Many, many means of motivation may be employed. Reading is found necessary at practically every turn of the unit."

Subjects in addition to those offered at N.Y.I.E.B.

North Carolina School for the Blind:

Fourth Grade:

Physiology.
Winslow and Hahn- The Game of Healthy Living.

Typewriting.
Jevon and Lessenberry- 20th Century Typewriting.

Fifth Grade:

Physiology - Continued.

History - Dramatize incidents from Guerber's Stories of the Thirteen Colonies.

Sixth Grade:

History - Biographical Method.
Beard and Bagley- First Book in American History.

Overbrook:

Fourth Grade:

Physiology and typewriting.

Fifth Grade:

History (Guerber)
Sanitation and hygiene.

Sixth Grade:

History (Beard and Bagley).
Physiology.

Western Pennsylvania:

Fourth Grade:

History
American History Stories, Pratt.

Fifth Grade:

History
American History for Pennsylvania Vol. I.

Sixth Grade:

History
American History for Pennsylvania Vol. II.

Overbrook:

Dramatics and Expression introduced in the 5th and 6th grades.

Time Schedule: Grade V.

Reading	50	Minutes	per	week
Writing	100	"	"	"
Spelling	150	"	"	"
Language	200	"	"	"
History	150	"	"	"
Geography	200	"	"	"
Arithmetic	200	"	"	"

Grade VI.

Reading	100	Minutes	per	week
Spelling	100	"	"	"
Language	200	"	"	"
History	150	"	"	"
Geography	150	"	"	"
Arithmetic	200	"	"	"

Perkins Institution:

Perkins has adopted the activity unit system for all the elementary grades.

All the other subjects of study center in the unit, including history, geography, braille writing, reading, arithmetic, music, drama, handwork. All are supposed to be correlated with the activities of the unit. These units are:

Kindergarten - The Farm.
Primary - Indians.
Grade I - The Foods We Eat.
Grade II - Shelter.
Grade III - Clothing.
Grade IV - A Viking Unit.
Grade V - Transportation.
Grade VI - Imports and Exports.

PUBLIC SCHOOL CURRICULUM PRACTICES

Grades IV, V, and VI

AVERAGE NUMBER OF MINUTES A WEEK ALLOTTED TO CONSTANTS

	In 14 American Cities		At N.Y.I.E.B.	
	Grade V	Grade VI	Grade V	Grade VI
Art	80	77	x	x
English:	415	404	400	400
Composition	124	105	100	100
Grammar	64	80	200	200
Reading	168	165	200	200
Spelling	88	78	100	100
Geography	160	165	200	200
Health:	175	160		
Hygiene	62	53	Houses?	Houses?
Physical Ed.	116	114	120	120
Home Economics	84	99		
Industrial Arts	94	98	60-180	60-180
Arithmetic	204	200	200	200
Music	88	90	30-200	30-200
Science	69	73	Incidental	Incidental
Social Studies	123	148	Incidental	Incidental

PUBLIC SCHOOL CURRICULUM

GRADE IV

The current trend in the public schools is to organize fourth grade work around the social sciences, such as geography.

These units contain much helpful material and suggestions which might be correlated with the requirements of the New York State Syllabus for this grade.

Home Life Today: How We Are Fed, Sheltered, Clothed.

Natural Environment and Man's Activities
    Geography Units - Milwaukee, Wis., Cicero, Ill. units.

Where Our Ways of Living Come From (American Book Company)

INTEGRATED SOCIAL SCIENCE UNIT GRADE FOUR

SHOREWOOD SCHOOL, MILWAUKEE, WIS.

This unit covers parts of the New York State Syllabus for Fourth Grade Geography.

I. Globe and Map Study of the World.
II. Living in the Lowland Country.
III. Swiss People who Live in the Mountains.
IV. People Living in the Cold Countries.
V. People of the Desert Region.
VI. Hot-West Regions of our Earth.
VII. Living Along a Rugged Coast.
VIII. Beginnings of the Age of Discovery.
IX. The Explorers.

These units develop correlations with science, reading, language, music, and handwork. The uses of music are especially suggestive of possibilities for blind pupils.

Each unit contains overviews, activities, projects, summaries, special assignments, exercises, problems, pupil guide sheets, illustrative materials, and tests.

PUBLIC SCHOOL CURRICULUM PRACTICES

for Grades V and VI
(Based on a survey of 14 typical cities)

ENGLISH. The 14 cities are practically agreed as to the proportions of time allotted to the various divisions of this subject; as follows:

Subject and Per Cent of time	Grade V	Grade VI
Composition	30%	24%
Grammar	8%	15%
Literature and Reading	41%	36%
Spelling	21%	19%

The tendency is from formal to functional grammar, and this leads to increased time allotments to composition in comparison with grammar.

HEALTH. In the fifth and sixth grades about twice as much time is devoted to physical training as to instruction in hygiene. Thirteen of the fourteen major cities surveyed include health education in the fifth and sixth grades.

INDUSTRIAL ARTS. Industrial Arts in nine of fourteen major cities begin in the fifth grade with a course in manual arts and home mechanics. The same course is continued through the sixth grade.

HOME ECONOMICS. The average practice is to give for greater emphasis to clothing or sewing than to foods or cooking in the fifth and sixth years. In the fifth year elementary serving is offered in a majority of schools. Cooking is added in the sixth year.

ARITHMETIC. Time allottments vary from twenty-four to sixty minutes daily.

SCIENCE. Nature study courses dealing largely with plant and animal life. The child of fifth and sixth grades has an absorbing interest in natural phenomena. Eight of fourteen major cities provide nature study courses in these grades.

HISTORY. The major tendency is to teach United States history as a continuous course through the fifth, sixth, and seventh years. The fifth and sixth years deal with the history prior to the Constitutional period.

PUBLIC SCHOOL SOCIAL STUDIES

UNITS FOR GRADES V AND VI

GRADE V.

Man's Increasing Control Over Nature. Life in agricultural regions.
Cicero, Ill. 4 units.

Transportation and Communication.
Horace Mann School units.
Ann Arbor Mich. units.
Teachers College units Nos. 35 and 72.

Ways of Living in the Machine Age.
American Book Company.

GRADE VI.

Civics: How Our Community Depends on the Cooperation of its Citizens. Houston, Texas units.

History: The Hudson River Valley. The Westward Movement.
Horace Mann School units.

How To Study One's Own Community--Manhattan. The Ancestral History of a Class.
Teachers College units 45 and 19.

"From Then Until Now" --Primitive Man to the Present.
Greenan & Cottrell (McGraw Hill Co.)

Richer Ways of Living
(American Book Company)

SUMMARY AND RECOMMENDATIONS

SUMMARY--FOURTH, FIFTH and SIXTH GRADES

Courses to which more attention is given in Public Schools than at N.Y.I.E.B.

Health and Hygiene
Home Economics--Sewing and Cooking
Nature Study--Plant and Animal Life
--Gardening
Home Mechanics--for boys and girls
Social Studies--U. S. History
--Units on Community Life

Courses in other schools for the Blind not offered at N.Y.I.E.B. (Grades 4-6)

History
Home Mechanics
Sewing
Units in the Social Studies (As at Perkins)

RECOMMENDATIONS

The objectives for these grades (4-6) should include physical health, and normal social adjustments, as well as the mastery of the elementary essentials of the tool subjects. The curriculum and methods should take into account the health and social objectives, no less than the academic.

For this reason, we should give more attention to the development of units of instruction in:

Health and Hygiene
Nature study
Home economics
Home mechanics
Social studies

As a beginning, short units from four to six weeks might be developed. These units would be, not merely activities, but units of instruction, that is, one group of topics which can be taught in a closely related series of class exercises.

I believe this can be done without encroaching on the time necessary for the mastery of the tool subjects which of course are absolutely necessary for future success in school. At least 50% of the school day should be devoted to these tool subjects.

Nevertheless, these subjects need to be motivated by correlation with life-centered units. There should be a more gradual transition from the free activity of the lower school to the more formal academic type of study. This should eliminate some of the disciplinary problems.

These units can be developed in connection with the subjects now offered--such as geography, reading, and industrial arts. Time might be taken from these subjects to try out a short unit of from four to six weeks. Nature study in connection with geography, socia studies as content of reading lessons, and home mechanics in connection with manual arts, are examples. Social studies units on food, clothing, transportation would correlate with home economics and industrial arts. The social studies should center around geography rather than history in these grades.

As a method of developing these units, I would suggest the two teacher system--the principle teacher and a cadet teacher working together. It would be too much to ask one teacher to assume the work of preparing new curriculum materials in addition to the class instruction. Two teachers working together could share the work.

If the new units are to have a fair trial the cadet teachers should be teachers of some experience and skill, and training in progressive methods.

The cadet teacher for example could prepare individual assignments, tutor backward pupils, assist in discipline problems, prepare materials for new curriculum units, have charge of activities, work out correlations between the tool subjects and activity units, etc.

These cadet teachers might be Teachers College students who could develop new curriculum units in connection with the requirements of their courses at Teachers College.

Of course there would be the problem of selecting teachers who could work together harmoniously, but I think the advantages of the two teacher system are sufficient to warrant giving it a trial.

In connection with the foregoing report I have appended a list of units which these teachers should study with a view to adopting them to our needs.

The development of these new units would, of course, be a gradual process. It involves no wholesale overturning of present schedules or methods. It simply means the trying out of new materials over a short period of time, in connection with courses already offered.

KEEPING PACE WITH THE ADVANCING CURRICULUM

At the New York Institute for the Education of the Blind

I. The Changing Curriculum.

Recently an infuriated parent withdrew his eleven year old son from a New York City public school because he was being taught hemstitching. Perhaps this family needed the results of a course in "homemaking for boys." The incident, however, calls attention to the rapidly changing content of the school curriculum.

The rapid expansion of the curriculum in the last quarter of a century may be realized by comparing the report of the Committee Ten of 1890, with that of the Curriculum Commission of 1926.*

The Committee of Ten dealt with only forty subjects, and implie a uniform curriculum in all schools. It was composed of subject-matter specialists, and sought a systematic, logical treatment of subjects deemed of disciplinary value. By 1926 when the Curriculum Commission of the Department of Superintendents met, some 150 subjects were being taught in the schools. The Commission maintained that the curriculum should take into consideration the social needs of the community and the capacities of the individual child. Its viewpoint was child-centered rather than subject-centered; its approach, psychological and sociological rather than logical and academic.

A recent investigator has estimated that within the last decade 35,000 new courses of study have been produced.** Thirty-two states have curriculum reconstruction studies under way at the present time.***

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*Report of the Committee of Ten on Secondary School Studies. Published by National Education Association, 1894.

Commission on the Curriculum of the Department of Superintendents. National Educational Association, Fourth Yearbook, 1926.

Foundations of Curriculum Making, Twenty-sixth Yearbook, National Society for the Study of Education, 1927.

**Betz, William, "The Reorganization of Secondary Education," in Eleventh Yearbook National Council of Teachers of Mathematics, 1936.

***Junior-Senior High School Clearing House, September 1936.

II. Some Permanent Principles.

These rapid changes and many new subjects make necessary some permanent principles of selection. Some of these permanent principles have been pointed out by Francis E. Palmer, Superintendent of the Iowa School for the Blind, in his address on "The Permanent in the Changing." His thesis is that "the goal toward which all true education moves had not changed fundamentally with the shifting currents of Time."*

The Principles which have guided curriculum developments at the New York Institute may be stated very briefly:

1. Philosophical. Ultimate reality in the educational process is to be found not in ideas nor in activities alone, but in the persons who have the ideas and perform the activities. We believe that this synoptic philosophy of personalism comprehends and transcends the acknowledged values of rationalism and functionalism. Spiritua adjustment, appreciation of life's meanings, the realization of eternal values in personality, should be no less an aim in the education of the handicapped than functional vocational adjustment.

2. Ethical. Educational values are rooted in ethical values. These include the physical, economic, and recreational needs of life as well as the intellectual, social, and moral values. The balance of these values in a strong character is more important than the mere accumulation of knowledge.

3. Psychological. The whole child goes to school--intellect, emotions, and will; head, heart, and hand. The synoptic approach of gestalt psychology places the functional aspects of behaviour in proper relation to the total self or person being educated.

4. Pedagogical. The curriculum should consist of experiences which arouse purposeful activity impelled by pupil interest, and result in the ability to adjust to the environment, and interpret life situations in terms of meanings as well as activities. The learning activities should grow out of real problems and provide for individual differences.

5. Social and Civic. The state has a right to require certair fundamentals necessary to good citizenship in a democracy. The curriculum should include experiences and interpretations designed to enable the pupil to understand our changing civilization, and discharge his social and civic duties. The social problems of the campus should provide a sufficiently large social laboratory for the student.

III. Regents Requirements Met.

The New York Institute maintains a course of study which meets the requirements of the Regents of the University of the State of New York. Pupils must pass the Regents' examinations in reading,

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*Presidential Address, American Association of Instructors of the Blind, Proceedings, 1936 p.p. 11-15.

writing, spelling, geography, arithmetic, English, and U. S. history with Civics, in order to receive their "preliminary certificate" for admission to high school.

A reappointment of from one to three years is possible to the elementary grades, but our pupils seldom fail or drop out at this point; most of them continue through the high school.

The Regents' requirements for the high school diploma have been increasingly liberalized. The required courses include four years of English, civics, economic citizenship, and American history, ninth year science, health and hygiene, a program of physical education, and a program of educational and vocational guidance. Major and minor sequences may be selected by the pupils. Of the sixteen units necessary for graduation, seven are required subjects, nine may be elective. These electives permit the adaptation of the course to the blind child's special needs.

IV. General Objectives in the Education of the Blind.

The aims of education for the blind are well summarized by the Committee on Minimal Essentials:*

> "1. Physical. The development of a strong and healthful physique capable of resisting disease and meeting the unusual physical strain inherent in the handicap.
>
> "2. Academic. A thorough elementary and high school education equivalent to that afforded seeing children.
>
> "3. Vocational. Vocational instruction adapted to each pupil's ability with a view to enabling him to become self-supporting.
>
> "4. Social. Socialization of each pupil to enable him to become an acceptable and contented member of the community."

Addresses and discussions at the last meeting of the American Association of Instructors of the Blind showed that schools for the blind are awake to the reformulations of educational objectives in the public schools, and alive to the necessity of adapting the curriculum to changing conditions and specialized needs.**

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*American Association of Instructors of the Blind, Proceedings, 1934.

**See AAIB Proceedings, 1936:
Quimby, Neal F., An Ideal Curriculum for a School for the Blind, p.p. 16-24.
Woodward, Mrs. Rice, Objectives Fixed and Variable in the Education of the Blind, p.p.24-28.
Abel, Georgia Lee, Changes in the Course of Study to Meet the Needs of the Day and Locality, p.p. 102-106.

V. Teacher Training.

These social and civic requirements reveal the truth that the curriculum is simply one aspect of the educational process. In a sense, the curriculum is an abstraction. It is an experiential medium of personal relationships between teachers and pupils, in a total school and community situation. There are no pedagogical panaceas, Skillful teaching is essential to the success of any curriculum.

Trained teachers are the first essential. When Dr. Merle E. Frampton, Principal of the New York Institute became Head of the Department for the Education of the Handicapped, at Teachers College, Columbia University, he inaugurated a program of cooperative service in training teachers for all schools and classes for the handicapped In the New York Institute, thirty-two students are enrolled in training classes for teachers of the blind.

VI. The Elementary Curriculum.

The current trend in the elementary school toward the development of large units of life-centered experience has begun to make headway in schools for the blind. Such units are an integral and basic core of the primary school work at the New York Institute.

The primary schedule includes braille reading and writing, arithmetic, spelling, language, physical education, music, handwork, supervised play and project work. The project work includes nature study, trips to school grounds, garage, kitchen, poultry yard, farm, and museums.

The work of the first three grades is largely organized according to the unit system; including units on the home, the farm, natur the store, food, clothing, housing, and transportation. Numerous projects center around the seasonal holidays, and childrens' interest such as the playhouse project, and the circus project.

Elementary science, geography, and natural history are develope in a closely integrated series of units on The Study of Our World. These projects are closely correlated throughout with the tool subjects.

Drill on the tool subjects is regarded as essential. Approximately fifty per cent of the time of teachers and pupils in the elementary school is devoted to direct instruction in braille reading, writing, spelling, and arithmetic.

VII. Junior and Senior High School Courses.

The pressure for new courses in the high school, suited to pupils of varying interests, capacities, and needs, has led to four or five different types of curriculum reorganization:

1. The elective plan.
2. A core curriculum with variables.
3. Parallel curricula.
4. Special classes for "case groups."
5. Individual differences recognized in classroom instruction.

At the New York Institute we have sought to adapt the best features of these plans. Five parallel curricula are offered:

1. College Preparatory.
2. General.
3. Music.
4. Vocational.
5. Commercial.

The subjects, units, and methods of these curricula are selected and arranged with a view to meeting the essential objectives in the education of the blind, as outlined above.

A large percentage of our students are able to meet the requirements of the college preparatory course, and many former students now in college maintain a high standard of work.

In harmony with our objective to prepare students for life, and not to overstress the intellectual or academic achievements only, new features have been accredited in the vocational, commercial, and music departments.

At the New York Institute we believe courses in music should be increasingly accredited as of special value to all blind children Music appeals to the blind as to the sighted because of its tone and rhythm which are immediately perceived or sensed, and carry with them an emotional response largely independent of visual interpretation.

Music has special educational values for the blind. It provides a legitimate outlet for the emotions, and develops wholesome emotional attitudes. It opens an avenue by which the blind may appreciate and respond to the beautiful. It develops patience, concentration, and trustworthiness. Music develops the spirit of cooperation. At the New York Institute, we look upon music as one of the main aids to the socialization of pupils and studies.

Attention is being given to choral work, instrumental instruction, piano, organ, and violin, and the concert recorder. Excellent instruction in band and vocational music has made this work most popular. Basic courses in music history and harmony are not neglected. Selected pupils pass the Regents' examinations in these subjects. Music scholarships are granted to graduates of other schools for the blind throughout the United States.

The basic task of the school in helping the blind to successful vocational adjustment is to provide them with a number of practical skills to which they can turn their hands. For this purpose it has

seemed advisable to provide a wide variety of basic manual arts and prevocational work in numerous semi-craft and semi-trade lines. The objectives of these courses throughout are primarily educational the utilitarian objective is secondary.

In addition to general shop work, woodworking, and the usual arts and crafts for the blind, the new courses in radio, auto-mechanics, poultry, bee keeping, and farming are proving popular. The school greenhouse is available for instruction in botany and horticulture.

The commercial course includes typewriting, braille shorthand, dictaphone practice, economics, merchandising and commercial law. Actual news stand operation offers practical training.

Graduates of the school give the students the benefit of their experience in lectures on vocational topics.

In personnel counseling, and vocational guidance work, the school makes use of the vocational findings of the American Association of Instructors of the Blind and the American Foundation; and cooperates closely with various placement agencies for the blind.

Toward the objective of socializing the blind pupil increasing emphasis is being given to dramatics and club work. Classwork in dramatics eventuates in frequent assembly programs. The girls' Rainbow Club gave an adaptation of Maeterlinck's "Blue Bird." The Boys' Olympian Society produced the submarine tragedy "Submerged." In addition to Boy Scouts and Girl Scouts, literary, language, and current events clubs have been formed. It is hoped that this work can be developed to the point where it is worthy of academic credit as it comes to function effectively in the attainment of this major objective in the education of the blind.

The objective of health has been furthered by new courses in social hygiene; medical work with children and parents, through our Parent Teachers Association; and through a program of preventative and corrective physical education for both boys and girls. The aims of this department are to train for healthful living, correct muscular weakness, develop better posture, skill in sports, fair play, self-reliance, fellowship and leadership. Suitable games have been developed; wrestling is taught; and track teams compete with other schools for the blind.

Special classes and opportunity classes have been organized for retarded groups and for the partially blind. Much individual tutorial instruction is provided. Features of the Dalton plan which have been adopted are the individual assignment and the laboratory room for certain groups.

In the effort to meet the needs of the day and locality, new courses are being developed at the New York Institute. Such are the new courses in general science, physics, biology and botany.

The New York Institute is the only school for the blind in the United States to offer courses in Italian. These courses meet local needs and are accredited by the New York State Board of Regents.

Other courses recently reorganized to meet modern pedagogical and community needs are:

The World We Live In: Activity units for the third grade correlating nature study, geography, reading, writing, spelling and arithmetic.

Home Making for Blind School Girls: A life-centered approach to home economics.

Economic Citizenship: A treatment of this subject especially adapted for use in schools for the blind.

VIII. Curriculum Research.

In the secondary school there is still imperative need for re-evaluation of the traditional courses of study to determine what should be discarded and what retained, and ascertain how learning can be made more effective of time and cost. Investigation, researc and experimentation are necessary to discover valid answers to these basic curriculum problems.

Much of the research carried on by the staff of the Institute consists of service studies related to the improvement of curriculum and methods. Among the studies now under way or proposed for the near future are the following:

Analysis of the results of the Stanford Achievement Tests to determine frequency of typical errors, time allotment, and grade placement of various topics in the curriculum.

Re-examination of methods of teaching arithmetic to the blind from the standpoint of recent studies in that field.

Selection and development of texts and units in the Social Studies from grades four through nine.

The development of a check list of instructional activities for the self-improvement of teachers in schools and classes for the blind.

Diagnosis of the basic vocabulary and vocabulary needs of pupils in a school for the blind.

Diagnosis of social and civic attitudes of blind school children, including attitude toward their handicap.

IX. Setting the Pace.

This period of curriculum reconstruction in many states gives an excellent opportunity for schools for the blind to obtain recog-

nition and school credit for curricula independently built to meet the special needs of the blind. No longer need we merely imitate the schools for the sighted. But schools for the blind should strike out boldly to build curricula meeting the special objectives of education for the blind; and then expect from state boards of control academic credit for courses of study worthily meeting these objectives.

X. Reaching the Goal.

In accrediting courses for the school diploma consideration should be given to maintaining a balanced, well-rounded life. All the objectives urged by the Committee on Minimal Essentials should be fairly accredited--the physical, vocational, and social, no less than the academic.

To quote a distinguished educator--"If we knew that a student was to die the day he received his diploma, would we fill him with book-knowledge and direct his attention to vocational adjustment, or would we wish him to acquire a sense of values, an acquaintance with beauty, and a working philosophy of life?"

The school curriculum must provide "an experience valid within itself, or not valid at all. The basic problem is the problem of self-mastery, of self-discipline. Character, personality, intelligence belong together."

Students desire self-realization above all else. "Let us [illegible] openly make the appeal to their dearest ambition, to be significant persons, physically, intellectually, emotionally, spiritually."*

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*Wriston, Henry M., President Lawrence College, Bulletin of Association of American Colleges. March 1936 p.p. 11-26.

PART II

A STUDY IN CURRICULUM FOR THE THIRD GRADE

Emily F. Ellis

A STUDY IN CURRICULUM FOR THE THIRD GRADE

I. General Objectives:

1. To help third grade blind children to become increasingly familiar with their environment, both immediate and remote.

   a. To help them explore their immediate environment, increasing that environment to include larger and larger areas.

   b. To help them gather information regarding the world as a whole, their more remote environment.

2. To help children meet the situations which continually arise in their environment; i.e.

   a. The situations that arise from daily living together.

   b. The situations that arise from constantly gaining new information and new techniques.

3. To help the pupils acquire the techniques, such as reading, writing, and facility with numbers, which will enable them to live intelligently.

4. To help them face their situations and increasingly to offe their own ideas, their own purposes, and their own plans for solving their problems.

5. To help the children accomplish something of significance to themselves and to others, as they explore, plan, construct, and share their endeavors.

6. To help them gain practice in such attitudes as consideration for others, cooperation in a group, self-reliance and independence, fairness, and joyousness in working with others on common problems.

II. These general objectives may be realized through:

1. Class work in:

   a. A Study of Our World (History, Geography, Science)
   b. Spelling and Writing
   c. Reading
   d. Language
   e. Arithmetic
   f. Handwork

2. Particular attention to the problems of individual children.

3. Work with special teachers in music, physical education, and speech correction.

(These branches of the curriculum, being separate from the regular third grade organization, are not to be included in this paper, though their importance cannot be over-emphasized.)

III. The Study of Our World.

1. Objectives:

a. General

1.- To help the children become more familiar with their own part of the world.

2.- To help them push out their own boundaries and thus to expand their environment to larger proportions.

3.- To help the children discover more and more elements of absorbing interest within the world.

4.- To help them answer their ever-increasing questions about the world in which they live.

5.- To help them understand something of the long history of the earth, its general shape and characteristics, its developing life (including flowers, birds, and animals), the peoples of the earth, and their various needs.

b. Specific

1.- To help the children formulate their own questions about the world and to examine these questions with the idea of finding answers to some of them.

2.- To help pupils recognize the many different ways by which questions can be answered, and to utilize these ways.

3.- To help the children answer the questions, both simple and complex, about their immediate environment--questions that arise from their visual handicap.

4.- To help them answer their larger questions about what kind of world this is.

5.- To give them opportunity to explore for themselve their own school community and parts of their own city, finding out interesting facts about th world.

6.- To help them become familiar with facts regarding the geographical formation of the world and its physical peculiarities.

7.- To enable them to understand to some degree the long history of the world through the ages.

8.- To help them find out in more detail the geographical facts about the city or town in which they live and its surroundings.

9.- To enable them to become familiar with stories of historical events and persons, especially connected with their city and its vicinity.

10.- To help the pupils find out interesting facts about life on earth--the first life, developing cells, fish, birds, animals, human life.

11.- To help children find out the needs of living things--food, shelter, warmth, etc--and the ways in which various forms of life meet these needs.

12.- To help them discover the needs of people, and their different needs according to the changing conditions of life.

13.- To give children opportunity to find out how we and our neighbors have our needs satisfied, through interchange of industry, agriculture, transportation, communication, etc.

14.- To help pupils realize the abounding interdependence of people on earth.

2. Methods:

a. Asking questions.

1.- Encourage the children to ask questions.

2.- Keep records of the questions asked by the children.

3.- Make frequent reference to questions which have been raised but have not been answered.

4.- Check back occasionally on lists of questions, to find out which have been answered.

5.- Keep especially thoughtful or pertinent questions posted on the bulletin board.

b. Enlarging personal experience through excursions.

   1.- An excursion in the school building or school yard may seem trivial, but it is important if it helps the children find out something.

   2.- Be sure that trips are not too long and do not include too many new things.

   3.- Tap resources everywhere that will help the children gain experiences of value in their study of the world.

   4.- Enlist the help of everyone possible, to make an excursion an enjoyable experience.

   5.- Follow up excursions with meaningful discussions and reports.

c. Enlarging personal experience through reading individually.

   1.- Encourage use of the third grade readers in answering questions about the world.

   2.- Encourage the children to read books which sound interesting.

   3.- Recommend to them books or pages which will help to answer definite questions.

   4.- Encourage their recommending books or passages to each other.

d. Enlarging personal experience through reading in group

   1.- Help those who are interested in answering similar questions to form small groups for reading together material that will help answer these questions.

   2.- If necessary, prepare special material for such groups, in order that they may function successfully.

e. Enlarging experience through listening to the teacher read.

   1.- Read to the children material which is too difficult for them to read themselves, or which is too extensive to be readily transcribed into braille.

   2.- Read material which they have requested.

3.- Read material of own selection, suggesting that it is interesting and relevant to questions that have been raised.

4.- Read material which other children, perhaps older groups, have recommended.

5.- Read only so long as there is definite interest on the part of the listeners.

f. Enlarging experience by enlisting the help of parents, friends, and others who might be of assistance.

1.- Encourage the children to ask questions about the world, of people whom they meet in ordinary contacts.

2.- Make provision for inviting special speakers to help answer questions of interest to the group.

3.- Help the children to judge between reliable sources of information on a given subject and those which are not so reliable.

g. Enlarging experience by testing and experimentation.

1.- Offer opportunity for the children to experiment with the forces of the world, as gravity, suction, etc

2.- Offer them opportunity to test the forces of life, of seeds and warmth and care.

3.- Encourage the children to use free time in experimenting with whatever miscellaneous materials may be available.

h. Sharing information and experiences through talks, records, and reports.

1.- Make ample provision for the informal sharing of experiences.

2.- With the children, make definite plans for the sharing of information attained through study.

3.- Work out with the children some system of written reports and records of work done.

4.- Make provision for the sharing of outstanding experiences with other groups in the school.

i. Sharing information and experiences by graphic representation.

1.- Whenever it aids the understanding of the group, make some graphic representation of material studied.

2.- This may be done by such means as:

    a.- Dramatization.
    b.- Table scenes, as one showing the life of cavemen.
    c.- Large construction, as the building of a boat.
    d.- Clay work.
    e.- Map work, as the making of a map in papier-maché.

j. Preserving information and experiences for future groups.

    1.- Make a book of interesting information, for other.

    2.- Preserve useful maps, etc., for others.

3. Materials:

    a. Any reliable materials on any subject connected with this study are useful, either to children or teacher or both.

    b. Paucity of material along these lines, in braille, makes it necessary for the teacher to transcribe much material as the need arises, or to read much material to the children, or both.

    c. A list of books which may be used as a point of departure in this study follows:

Bass, Florence, Stories of Pioneer Life, Heath, 1928.
Bormann, Henry H. Bridges, Macmillan, 1934.
Brigham and McFarlane, Our Home State and Continent (New York State Edition), Amer. Book Co., 1935.
Brigham and McFarlane How the World Lives and Works, American Book Company, 1933.
Burgess, Thornton W., Burgess Animal Book for Childre
Little Brown, 1920.
Burgess, Thornton W., Burgess Bird Book for Children, Little Brown, 1918.
Carpenter, Frances, Ourselves and Our City, Am. Bk. Co., 1928.
Carpenter, Frances, The Ways We Travel, Am. Bk. Co., 1929.
Carpenter, Frank, G., Around the World With the Children, American Book Co., 1928.
Carpenter, Frank G., The Clothes We Wear, Am. Bk. Co
1926.
Carpenter, Frank G., The Foods We Eat, Am. Bk. Co., 1925.
Carpenter, Frank G., Houses We Live In, Am. Bk. Co., 1926.
Camp, Ruth O., The Story of Markets, Harper, 1929.

Dopp, Katharine E., *The Early Cave Men*, Rand McNally, 1904.

Dopp, Katharine E., *The Early Sea-People*, Rand McNally, 1912.

Dopp, Katharine E., *The Later Cave-Men*, Rand McNally, 1904.

Dopp, Katharine E., *The Tree Dwellers*, Rand McNally, 1904.

Dukelow, J. H., and Webster, H.H., *The Ship Book*, Houghton Mifflin, 1931.

Duval, Elizabeth, *This Earth We Live On*, Stokes, 1927

Eaton, Jeanette, *The Story of Light*, Harper, 1928.

Heal, Edith, *How the World Began*, Rockwell, 1930.

Heal, Edith, *How the World is Changing*, Rockwell, 1930.

Holland, R. S., *Big Bridge*, Macrae-Smith, 1934.

Holway, Hope, *The Story of Water-Supply*, Harper, 1928

Hough, Walter, *The Story of Fire*, Doubleday Doran, 1928.

Keelor, K. L., *Working With Electricity*, Macmillan, 1929.

Kiner, Grace, *How the World Grew Up*, Rockwell, 1930

King, Marian, *Kees*, Harper, 1930.

Kummer, A. F., *The First Days of Man*, George Doran, 1922.

Lambert, Clara, *Talking Wires*, Macmillan, 1935.

Lent, H., *Diggers and Builders*, Macmillan, 1931.

Maxwell, Marjorie, *The Story of Books*, Harper, 1928.

Mitchell and Lambert, Manhattan: *Now and Long Ago*, Macmillan, 1934.

Olmstead and Grant, *Nan and Ned in Holland*, Row Peterson, 1916.

Parker, A. C., *The Indian How Book*, George Doran, 1927.

Patch, Edith M., *First Lessons in Nature Study* (Revised Edition) Macmillan, 1932.

Patch, Edith M., *Holiday Hill*, Macmillan, 1931.

Patch, Edith M., *Holiday Meadow*, Macmillan, 1930.

Patch, Edith M., *Holiday Pond*, Macmillan, 1929.

Patch, Edith M., *Holiday Shore*, Macmillan, 1935.

Perkins, Lucy F., *The Dutch Twins*, Houghton Mifflin, 1912.

Perkins, Lucy F., *The Indian Twins*, Houghton Mifflin, 1916,

Perkins, Lucy F., *The Japanese Twins*, Houghton Mifflin, 1912.

Reynolds, R. G., editor, "Our Changing World Series", Nelson and Sons, 1934, including:

- Banning, G. H., *Sailor Ways*.
- Edholm, L. M., *Ship Ahoy!*
- Frey, Mina A., *Children of the River*.
- Haynes, Muriel, *Our Electric World*.
- Irwin, Helen, *From Paddles to Propellers*.
- Starbuck, W., *Liners and Freighters*.
- Stout, Velma, *Wires Around the World*.

Sugimoto and Austen, With Taro and Hans in Japan, Stokes, 1936.
Watson, Elizabeth, The Story of Bread, Harper, 1927.
Watson, Elizabeth, The Story of Milk, Harper, 1927.
Washburne, C. and H., The Story of Earth and Sky, Century, 1933.

d. Miscellaneous sources in New York City rich in material for this study:

1.- Department stores.
2.- Markets.
3.- Travel bureaus.
4.- American Museum of Natural History.
5.- Heye Foundation of the American Indian.
6.- Museum of the City of New York.

4. Time:

a. The miniumu time given to this study should be one 45-minute period each day.

b. Actually, much more time will be spent on ramification of this study, since it carries over into reading, writing, spelling, language, and handwork.

IV. Spelling and Writing

1. Objectives:

a. General -

1.- To help children to write simple, connected prose accurately and freely.

2.- To help children to gain skill in writing short original compositions.

3.- To help children to use proper writing techniques skillfully, accurately, and with increasing speed

b. Specific writing objectives -

1.- To give children practice in writing braille letters quickly and accurately.

2.- To teach the children to write all the Grade 1½ contractions and to use them accurately.

3.- To help the children understand the principles of syllabication and to use these principles in dividing words at the end of a line and in accurate use of contractions.

4.- To give the children practice in writing the following punctuation marks and in using them:

period, comma, exclamation point, question mark, quotation marks, hyphen, apostrophe.

5.- To give the children practice in writing sentence of the three types (declarative, interrogative, and exclamatory) both at dictation and for original work.

6.- To introduce the writing of a paragraph or two or three consecutive paragraphs on a given subject.

7.- To introduce the writing of simple quotations and to provide practice in using these in written work.

8.- To offer opportunity for the composition and writing of simple original material, as:

  a.- Reports
  b.- Informal letters
  c.- Short original stories
  d.- Summaries of stories heard or read

c. Specific spelling objectives -

1.- To help pupils learn to spell orally and to write the fundamental words for this grade.

2.- To offer ample opportunity for the children to use words recently learned, in writing activities

3.- To help the pupils develop a satisfactory technique for the study of spelling.

2. Methods:

a. For the teaching of braille writing -

1.- From the first day, insist on good position of back, head, arms, hands, fingers, slate, and stylus.

2.- From the first day, insist on accuracy in the formation of braille letters.

3.- Give occasional speed drills in the writing of letters or simple words. However, in general practice encourage accuracy rather than speed.

4.- Introduce the writing of Grade 1½ braille as follows:

  a.- During the first four weeks of the school year, give review drill in writing letters, words and sentences, Full Spelling.

b.- During these same weeks, review the Whole Words--*but*, *can*, *do*, etc.--and give drill in their use.

c.- During the fifth week, introduce Grade 1½ contractions. Explain that a new braille sign stands for two or more letters, and illustrate by the signs *and*, *for*, and *the*. Teach the pupils to call these the "a-n-d sign", "f-o-r sign", etc., rather than "and" or "for." Teach the contractions by dot-numbers, as a-n-d- dots 1-2-3-4-6
t-h-e- dots 2-3-4-6
Teach the writing of words in which these contractions are used, as:

stand
hand
form
before
them
they

d.- Using this same method, teach the other contractions thus:

6th week - of, en, in
7th week - with, th, sh, ing
8th week - ou, er, gh
9th week - ar, ow, ed
10th week - wh (with accompanying drill in questions using *where*, *what*, *why*, *who*)
11th and 12th weeks - special drill in words from the third grade spelling list or words in common use in this group, usir these contractions.

Note: Some pupils will progress faster than this suggested schedule, and some more slowly before they have mastered every sign, but thorough drill following this order should be satisfactory.

e.- During subsequent weeks, give occasional drill in contractions alone and in common words using contractions. Watch continually for accuracy in ordinary writing.

6.- Observe the following principles:

a.- Insist on the children's describing a contraction by its dots, as "w-h is dots 1-5-6" and *never* as a "backward S".

b.- Introduce a new contraction by calling attention to similarities, if there are any, as

i-n sign is a low I
e-n sign is a low E
w-i-t-h sign is a W with dot 3 added
o-f sign is an O with dots 2 and 6

This often prevents confusion in contractions of opposite formation.

c.- When a contraction has a whole-word meaning (as t-h, *this*, and s-h, *shall*), introduce the whole word at the same time as the new contraction.

d.- Never, after introducing contractions, introduce a word in spelling drill which contains a contraction not yet learned. For example, *dinner* should not be given in a third grade spelling drill until the eighth week or later, for although the i-n sign is learned in the sixth week, the e-r sign is introduced in the eighth.

e.- Give special continuous drill in words in which the contractions might be confusing, as *mother* (m-o-th-er), *father* (f-a-the-r), and *enough* (e-n-ou-gh).

b. For the teaching of spelling -

1.- Teach an average of 40 words per week, of which 25 are new words from the third grade spelling list, 5 to 10 are review words, and the rest, words occurring in class use (as in Language or the Study of our World) but which may not be in the suggested list for the grade.

2.- During the first three or four weeks of the school term, review second grade spelling, orally and in writing.

3.- Thereafter, follow the test-study method as recommended by:

a.- *The Spelling Syllabus for Elementary Schools 1935*, published by the University of the State of New York, pages 16-17.

b.- Breed, F. S., *How to Teach Spelling*, in "The Normal Instructor and Primary Plans" for January, 1928, pages 24 and 76.

c.- Keener, E. E., *Report to the Spelling Committee of the 1926 Yearbook*, National Educators Assoc., pages 128-129.

4.- This method is:

a.- Test children on the words for the week on Monday.

b.- Give each child a list of the words he misspelled in Monday's test.

c.- Supervise each child's study of his own list.

d.- Review the entire list orally on Wednesday or Thursday or both, accompanied by individual study of pupils on their own words.

e.- On Friday test all pupils on the week's word in writing.

5.- From time to time give those who need it special drill in phonetic spelling, with emphasis upon vowel differentiation. Follow such word lists as those in "Beacon First Reader", Ginn and Co., pages 135-155.

6.- Give the children oral drill in recognition of syllables, and give practice in dividing words at the end of a line in written work.

7.- Keep a braille list of the current spelling words in a convenient place on a bulletin board, for the reference of all the children, encouraging their use of this list.

8.- Give the children ample opportunity to use all words newly learned, either by dictated sentences or in original work of their own.

9.- For those who have made no errors in the test on Monday, there are numerous alternatives, such as:

a.- Give them a supplementary list of harder words, such as those connected with reading, geography, or other study.

b.- Give them this study period for other work which they may need more.

c.- Give them this time for free activity.

d.- Encourage them to make a braille word-list of words studied and used in their grade, for reference of all.

10.- Further analysis of a good method of teaching children to study spelling is given in the Spelling Syllabus for Elementary Schools, State of New York, pages 18-19.

c. For teaching correct use of sentences, paragraphs, quotations, etc., in ordinary composition.

1.- Establish correct methods first in braille capital sign and period for simple declarative sentence.

2.- Help the children to recognize a question by oral drill; give them practice in writing questions.

3.- Help the children recognize an exclamation by oral drill; help them gain practice in writing exclamations.

4.- Give oral drill in recognizing quotations, and written drill in making quotation marks correctly. Offer opportunity for the writing of simple quotations, such as:

"Please come here," she said.
She said, "Please come back."
"Do you want me?" I asked.
He asked, "Will you come with me?"

5.- Introduce the unit of the paragraph, explaining how to write it. Encourage the writing of one paragraph, and then of two or three.

6.- Give preliminary drill in all these forms orally first, then through dictation, and finally in original composition.

7.- Give ample opportunity for the recognition of new forms in ordinary reading, and in use of braille slips.

d. For developing interest in writing:

1.- Develop interest in accuracy by posting good papers on bulletin board, by individual commendation, etc.

2.- Develop interest in conveying thoughts on paper by

a.- Individual written reports or stories to be read to the rest of the class.

b.- Individual notebooks for various uses.

c.- Class records of work accomplished, of interesting information gained, of accounts of money spent by class, of plans for future endeavor, etc.

d.- Writing for communication with other persons or groups, as writing letters home or to absent classmates, sending notices to other classes, etc.

e. For use of the braille-writer, see section on Handwork.

3. Materials:

a. Texts for the teacher:

1.- Elementary Spelling Syllabus of the University of the State of New York, 1935 edition.

2.- Brown, Burdick and Jeffers, The Composition Speller, New York State Edition, Book One, Rand McNally, 1930.

3.- Fassett, James H., The Beacon First Reader, Ginn and Co., 1913 - Phonetic lists on pages 135-155.

b. Materials for the pupils:

1.- Braille lists of words to be learned:

a.- A general list on the Bulletin board.

b.- Individual lists of words for special study.

c.- Third grade word-book, for reference.

2.- Braille slate and stylus for each pupil.

3.- Looseleaf notebook for each pupil in which he may keep spelling and composition work that is well done.

4. Time:

a. Not less than five 45-minute periods each week for entire class for both spelling and writing together.

b. Frequent additional opportunities for writing whenever its use is logical in the general class program.

V. Reading

1. Objectives:

a. General -

1.- To stimulate in children interest in reading for the sake of the information and the enjoyment found therein.

2.- To help children develop skill in reading, both orally and silently.

3.- To help children develop skill in thinking through and understanding what is read.

b. Specific -

1.- To help children develop correct technique in use of hands and fingers in reading.

2.- To help children develop skill in instant recognition of fundamental words.

3.- To help them build up techniques for attacking new words.

4.- To help them grow in ability to read aloud well.

5.- To help them increase their speed in silent reading.

6.- To help them gain in ability to understand what is read.

7.- To help them correct technical errors in reading.

8.- To teach them to read Grade $1\frac{1}{2}$ braille.

2. Methods:

a. Classification of the group into small sections for reading.

1.- During the first week of the term, allow children to read second grade or easy third grade material, in order to find out individual reading skills.

2.- Divide the class into as many small groups as necessary on the basis of apparent progress.

3.- Re-group the children whenever expedient throughout the year.

b. Usual method for study of new reading material:

1.- Have children read over lists of new and unfamiliar words on separate paper.

2.- Give pupils opportunity to find some of these words in title or first sentence or two.

3.- Give them opportunity to study through, silently, a section of material (paragraph, page, or chapter, according to ability).

4.- Have individuals read orally, to each other or to the teacher, parts or whole of section studied.

5.- Diagnose poor techniques and give further remedial work where necessary.

6.- Check on comprehension (see d. below)

c. As reading skill increases:

1.- Give fewer new words, and only the most difficult before introducing new material.

2.- Give longer selections at a time.

3.- Check on increased speed of silent reading; keep records.

4.- Check on increased fluency of oral reading; keep records.

5.- Check on increased ability to understand; keep records.

d. Types of tests for comprehension

1.- Classification tests, as:

a.- Arranging sentences in groups of like meanings.

b.- Picking out words that are alike, among many dissimilars.

c.- Picking out the odd word in a group of similar words.

2.- Tests for word recognition, as:

a.- Finding word opposites.

b.- Finding word similars.

c.- Finding words beginning or ending alike.

3.- Answering questions on the material read.

4.- Answering a Yes-or-No test on material read.

5.- Guessing riddles from reading.

6.- Following directions.

7.- Various other tests, as found in good readers.

e. Methods for stimulating good oral reading

1.- Set aside a definite time to share stories with others.

2.- Be ready to take time unexpectedly to allow one or more pupils to share stories with rest of the class.

3.- Invite another class to come to hear the reading of stories.

4.- Encourage children to find materials of general interest, to read in morning assembly.

5.- Encourage pupils to re-read to their parents the material they have studied.

f. Methods for stimulating interest in reading

1.- Be sure that children do not read material too hard for them. (An occasional exception may be made to this)

2.- Be sure that each child is reading material he likes.

3.- Encourage the children to choose the book to read or to choose the stories within the book.

4.- Encourage children to recommend "good" stories to each other.

5.- Encourage children to find answers to their questions and to find other information in books.

6.- Help children, in whatever way possible to enjoy reading.

g. Methods for introducing the reading of Grade 1½ braille

1.- With the more advanced group of readers, this introduction may be made at the same time as the study of contractions in writing (see page 9 above)

a.- Explain that a new sign stands for two or more letters, and illustrate by the contractions and, for, and the.

b.- Help children read sentences or a paragraph using these contractions alone and in words.

c.- Introduce other new signs gradually, giving drill sentences and paragraphs using each one in addition to those already learned.

d.- The more alert pupils will easily learn to recognize all the new signs in three or four days, and will turn with great pleasure to new reading material using Grade 1½ braille.

2.- With slower groups, this introduction should be made after study of contractions in writing is well begun. The exact time depends upon general skill in use of fingers in reading, as well as upon desire to learn the contractions.

a.- Encourage pupils to read material which they themselves have written accurately, using certain contractions.

b.- Have the children read new material using the same signs in different connections.

c.- Gradually introduce new contractions in various word combinations.

d.- Drill on word recognition with Grade 1½ contractions, particularly in recognition of such puzzling words as: there, enough, thought.

e.- Introduce a story or other material printed in Grade 1½ braille, using same methods as in offering any new material.

h. Special remedial methods

1.- To develop correct use of hands and fingers, correct posture, motionless lips, relaxed muscles, and other good physical habits.

a.- Be sure that the child understands the situation, in whatever field the trouble lies, as:

(1) He can probably read with greatest speed if fingers move smoothly from left to right on the line, if the left hand finds the next line before the right hand finishes, and if arms are at a 45-degree angle to the line of reading.

(2) He will become less tired if head and back are held straight and feet are flat on the floor.

(3) He will feel less tired if he stops frequently for relaxation.

(4) He will read with greater speed if he makes no motion with his lips.

b.- Help the child to be conscious of the right method as he reads day by day.

c.- Keep careful check to see that right habits are having a chance to form.

2.- To develop use of fingers instead of eyes in partially-sighted children.

a.- Be sure that the child understands the problem.

(1) He will read better and faster, in the long run, with fingers than with eyes.

(2) He needs and wants to save his eyes.

b.- Help the child continually to be conscious of the right method of reading.

c.- Keep check to see that right habits are forming.

d.- If necessary, help establish the habit of finger-reading by use of a shield.

(1) This is a light wooden shield five or six inches above the desk, attaching on back corners of the desk, so that the child cannot see his book.

(2) This should not be used any longer than necessary, but every appeal should be made to the child's pride and self-control to "read without peeking."

3.- To increase skill in quick-word-recognition.

a.- Use flash-cards of fundamental words, allowing child to move fingers over the card once, quickly, and then name word.

b.- Give special drill in phonics, for help in word recognition.

c.- Prepare whatever extra material is necessar using the kinds of words on which the individual child hesitates.

4.- To develop better comprehension.

a.- Use shorter selections, with gradual increase in length.

b.- Use easier selections, with gradual increas in difficulty.

c.- Discuss the material, both before and after reading.

d.- Give more constant practice in finding meanings in such short units as one sentence.

e.- Provide more constant practice in re-tellin the material in a slightly different way.

i. Methods for correlating reading with other school situations.

   1.- Further practice in reading is available through:

      a.- Reading to find information of geographical, historical, or scientific import, in connection with the Study of Our World.

      b.- Reading poetry for memorization.

      c.- Reading material for dramatization.

      d.- Reading spelling words, to learn them.

      e.- Reading arithmetic books.

      f.- Reading notices on the bulletin boards.

      g.- Reading letters received.

      h.- Reading a variety of other material in school and out.

   2.- The same methods should be used in reading for any purpose such as these, as in the "reading period", especially:

      a.- Classification of material according to the individual ability of children.

      b.- Emphasis on good reading habits.

3. Materials:

   a. Grade 1 braille (Full Spelling) for the beginning of th year -

      Elson and Gray, "Elson Basic Reader", Book II
      Coleman, Uhl, and Hosic, Pathway to Reading, Book II, Silver Burdett, 1925.
      Perkins, Lucy F., The Dutch Twins, Houghton Mifflin, 1912.
      Perkins, Lucy F., The Eskimo Twins, Houghton Mifflin, 1912.
      Andress and Andress, A Journey to Healthland, Ginn, 1924.

   b. Basic third readers in Grade 1½ braille -

      Baker and Reed, Curriculum Readers, Book III, Bobbs-Merrill, 1934.
      Browne, Withers, and Tate, The Child's World, Book III, Johnson Publishing Company, 1917.

Coleman, Uhl, and Hosic, *Pathway to Reading*, Book III, Silver Burdett, 1925.
Elson and Gray, *Elson Basic Reader*, Book III.
Fassett, James, H., *Beacon Third Reader*, Ginn and Co., 1913.
Lewis and Rowland, *New Silent Readers*, Book III, Winston, 1930.

c. Supplementary material for wider, independent reading, Grade 1½ braille -

Barrie's *Peter Pan*, edited by O. Perkins.
Burgess, T. W., *The Burgess Bird Book for Children*.
Dagliesh, A., *Relief's Rocker*, Macmillan, 1932.
Field, Rachel, *Polly Patchwork*
Huber, Bruner, and Curry, *The Poetry Book*, Part III, Rand McNally, 1926.
Perkins, Lucy F., *The Indian Twins*.
Phillips, Ethel Calvert, *Wee Ann*.
Pratt, O.W., *Legends of the Red Children*.
Spyri, Moni, *The Goat Boy*.
Stevenson, R.L., *Child's Garden of Verses*.
My Weekly Reader, Edition V.

(Of the many other books now in Grade 1½ braille, the large majority are fifth grade level or above, and are not suitable for even the advanced readers in the third grade)

d. Recommended list for immediate transcription in braille Grade 1½, so that there will be an interesting choice for young readers -

Eight copies of:
Hardy, "Best Stories", *Child's Own Way Series*, Book III, Wheeler Publishing Co., 1929.
One copy each of the following books:
Dagliesh, A., *The Blue Tea Pot*, Macmillan, 1931.
Field, Rachel, *Little Dog Toby*, Macmillan, 1931.
Flack, Marjorie, *Christopher*, Scribner's, 1935.
Flack, Marjorie, *The Story about Ping*, Viking Press, 1933.
Flack, Marjorie, *Wait for William*, Houghton Mifflin, 1935.
Freeman, Storms, Johnson, and French, *Child-Story Readers*, Book III, Lyons and Carnahan, 1929.
Hogan, Inez, *The White Kitten and the Blue Plate*, Macmillan, 1930.
Hunt, Clara C., *About Harriett*, Houghton Mifflin, 1916
Jones, Viola M., *Peter and Gretchen of Old Nuremberg*, Albert Whitman and Co., 1935.
King, Marian, *Kees*, Harper, 1930.
Kiner, Grace, *How the World Grew Up*, Rockwell, 1930.
Lent, H. *Diggers and Builders*, Macmillan, 1931.
Lofting, Hugh, *Noisy Nora*, Stokes, 1929.

Lofting, Hugh, The Story of Mrs. Tubbs, Stokes, 1923.
McCoy, Neely, Tale of the Good Cat Jupie, Macmillan, 1926.
Pease, E. F., Brave Tales of Real Dogs, Whitman, 1931.
Patch, Edity M., First Lessons in Nature Study, Revised Edition, Macmillan, 1932.
Olmstead and Grant, Nan and Ned in Holland, Peterson, 1916.
Sugimoto and Austen, With Taro and Hans in Japan, Stokes, 1926.
Suzzalo, Freeland, McLaughlin, and Skinner, Fact and Story Readers, Book III, American Book Co., 1930.

4. Time

a. The minimum reading time should be one hour a day for the entire class.

b. Continual effort should be made to encourage children to read beyond the required time, to take books home over week-ends and vacations, to borrow books from the public library, and otherwise to increase the reading time.

c. Slow readers should have additional individual help every day.

VI. Language

1. Objectives:

a. General -

1.- To help children to talk fluently and in an interesting manner.

2.- To help pupils to speak with verbal accuracy and grammatical correctness.

3.- To help children to gain an appreciation of good literature within their understanding.

b. Specific -

1.- To help children to talk in logical sequence, as:

a.- To tell a story well.
b.- To make a report in good order.

2.- To help pupils to form good titles, pleasing beginnings, and satisfactory endings to talks given for the enjoyment or benefit of others.

3.- To help pupils keep to the subject in general conversation or a more formal talk.

4.- To help them to join well in group discussions, offering ideas, considering various suggestions, and making a group plan or other decision.

5.- To help them to speak correctly in their use of grammatical forms.

6.- To encourage them to memorize choice poetry and to share it with others in the group.

7.- To give them opportunity to listen to stories and poetry read, to select what is interesting or memorable about this material, and to re-tell it well.

2. Methods:

a. Informal conversation

1.- Allow a regular time to talk over interesting things that have happened or interesting information obtained outside of school.

2.- Encourage children to take advantage of this opportunity, sharing experiences of all kinds with each other.

3.- Help the children become aware of what subjects of conversation are interesting to others.

4.- Help the children keep on one subject until it is finished before opening another.

b. Group discussion for a specific purpose

1.- Provide ample opportunity for pupils to talk together about any situation which they face together.

2.- Help the children to consider each side of a situation which they face, bringing together their suggestions and ideas.

3.- Encourage the children to work in committees to find solutions to their problems or answers to their questions, reporting to the larger group.

4.- Encourage the children to evaluate various suggestions offered for the solution of their problems, to choose between the various solutions, and to act upon the one they choose.

c. Talks and reports

1.- Provide ample opportunity for the children to make definite reports to the class on material studied individually or in small groups.

2.- Assign topics for review reports or talks, such as the information gathered in the Study of Our World.

3.- Encourage the children to evaluate such talks from the standpoint of clear speaking, interesting manner of speech, good beginning and ending sentences, and mastery of topic.

d. Story-telling

1.- Provide opportunity for the children to tell stories.

a.- Re-telling stories which they themselves have read.

b.- Re-telling stories which have been read to them.

c.- Telling original stories.

2.- Help children evaluate the telling of stories from the standpoint of clear sequence of events, delineation of the outstanding characters, and a well-marked climax and ending.

e. Dramatization

1.- Encourage any suggestion from the pupils to dramatize a story, either one read, heard, or invented.

2.- Encourage children to plan the playing of a story to combine their ideas for working out the dramatization,and to carry their endeavor through to a satisfactory conclusion.

3.- Be sure that the pupils find an opportunity for giving their play before an appreciative audience.

f. Memorizing poetry

1.- Help children become familiar with poems within their comprehension, and to choose poems which they would like to learn.

2.- Teach the "whole-method" of learning a poem; i.e., reading over the whole poem until it becomes almost "second nature" and then filling in with specific study of details.

3.- Encourage the pupils to share their poems with others in the class.

4.- Help the pupils to evaluate pleasing recitation of a poem.

g. Original work

1.- Give children ample opportunity for the creating of original stories, poems, etc.

2.- Unless a child is very facile in the mechanics of writing, be ready to take down at dictation any creative work, later transcribing it into braille for possible revision by the child and for preservation by him.

3.- Help children to evaluate their own and each other's work from this point of view: Has he done what he tried to do?

4.- Encourage children to share their creative work with others in the class.

h. Overcoming individual language errors

1.- Call to the attention of the individual child the grammatical errors he makes.

2.- Help the child substitute for each error a correct construction.

3.- Help him use this construction in formal reports, story-telling, and informal conversation.

4.- Help him notice when he uses the correct form.

5.- Find some way for the child to measure his own progress in overcoming errors.

6.- Try to develop pride in correct speech.

3.-Materials:

a. For informal conversation, specific group discussion, and talks and reports, the materials will be those used in a Study of Our World or in connection with general class activities, such as planning a party.

b. For story-telling and dramatization, the materials will be:

1.- Those used in connection with a Study of our World, as stories from history.

2.- Stories read by the children themselves (see Reading Lists, pages 19-21)

3.- Stories read by the teacher, as:

a.- The Selfish Giant by Oscar Wilde.
b.- The Bee-Man of Orne by Frank Stockton.
c.- A Dog of Flanders by Ouida.

c. For memorizing of poetry

1.- Poems found in individual reading of children.

2.- Any poems from Huber, Bruner, and Curry, The Poetry Book - 3, Rand McNally, 1926, such as the representative poems of Longfellow, Robert Louis Stevenson, Eugene Field, Tennyson, Marjorie Barrows, Rose Fyleman, Walter de la Mare, and Eleanor Farjeon.

3.- Poems read by the teacher and chosen by the children for memorization.

d. For original work, any stimulus possible, according to the needs and possiblities of the individual child.

4. Time:

a. Language training following these lines is involved in the entire school program, since "every situation in the school requiring or stimulating social intercommunication or individual self-expression affords significant opportunity for developing language ability (quoted from Bardwell, Mabie and Heath, Elementary English in Action, Grade III, Preface)

b. Definite opportunity for developing language should be arranged so that each element in the program receives proportionate attention.

c. Extra drill individually or in small groups must be given to those who have language difficulty of any sort

VII. Arithmetic

1. Objectives:

a. General -

1.- To help the children recognize the importance of numbers in ordinary situations.

2.- To help the children become skilled in using numbers and number combinations.

b. Specific -

1.- To help children gain skill in the use of the T, V, L Slate.

2.- To help pupils gain skill in mental arithmetic.

3.- To help them become more skillful in the reading of braille numbers.

4.- To help them become skilled in the following content material:

  a.- Reading and writing numbers of four figures.

  b.- Addition and subtraction processes.

  c.- Simple problems applying addition and subtraction.

  d.- Simple problems in United States money.

  e.- The multiplication tables to 9 x 10.

  f.- Written and mental multiplication by one figure.

  g.- Simple division by one figure.

  h.- Units of measure.

5.- To help children use numbers in practical situations in the classroom and outside.

2. Methods:

a. For skill in the use of the T, V, L Slate, give opportunity for practice in:

  1.- Reading and writing numbers on the slate.

  2.- Placing columns of numbers on the slate.

  3.- Adding columns of numbers.

  4.- Placing problems correctly on the slate, for subtraction, multiplication, and division processes.

  5.- Adding columns of money, with introduction to use of the decimal point.

b. For skill in mental arithmetic.

  1.- Give practice in:

    a.- Review of fundamental combinations in addition and subtraction.

    b.- Quick response to multiplication tables and multiplication combinations, with reverses.

    c.- Listening to a practical problem and deciding what process to use in solving it.

    d.- Solving practical problems mentally.

    e.- Adding long columns mentally.

2.- Introduce the formula for mental multiplication used throughout the New York Institute for the Education of the Blind.

a.- Give preliminary drill in multiplication on the type-slate.

b.- Introduce the formula for such a problem as: 254 multiplied by 3, saying:

"254 multiplied by 3.
3 times 4 are 12; put down 2 and carry 1.
3 times 5 are 15, and 1 are 16; put down 6 and carry 1.
3 times 2 are 6 and 1 are 7; put down 7.
7 - 6 - 2
The product is seven hundred sixty-two."

c.- Give thorough drill in use of this formula orally and silently.

3.- Give opportunity for games using mental arithmetic, as in Watson and White, Modern Primary Arithmetic, page 80, numbers 1, 3, 4, 6.

c. For skill in recognition of braille numbers

1.- Give practice in quick recognition of braille numbers wherever they occur, as in pages of reading books.

2.- Give opportunity for writing braille numbers, as in numbering pages of individual notebooks.

3.- Give practice in recognizing braille numbers in the arithmetic books.

4.- Introduce the use of braille signs for +, -, x, ÷, and =, as used in arithmetic texts.

5.- Introduce games for quick recognition of braille numbers, as in text (above).

"Fish Game", page 42 (ink print edition)
"Addition Drill Game", page 43.
"Subtraction Drill Game", page 43.

✓d. For introducing content material

1.- Oral explanation of new material by teacher (following the text, as given above).

a.- Children explain new material to show understanding.

b.- Children solve new problems, mentally and on type slate.

2.- Explanation of difficult new material to each child individually, using his slate:

  a.- Introduction to multiplying by one figure, as 423 X 2, is most successful when done this way.

  b.- This individual explanation is followed by all pupils doing similar problems on slates.

3.- Use of text-book to introduce new material.

  a.- Thus, money may well be introduced by the chart on page 65 of the text-book (page 123 of Vol. II, braille edition).

  b.- This is followed by an oral explanation by the teacher of how to write money on the T, V, L Slate, with practice in solving problems.

e. For using text-book in drill.

1.- The braille copies of the text are useful occasionally in connection with slate work or mental work.

2.- Almost any parts of the text may be used.

3.- The texts may be used in several ways:

  a.- In group drill, the entire class following problems on the page.

  b.- In individual work, one pupil referring to problems on a certain page and working out these problems on the type-slate, by himself

  c.- In small groups, three or four children working with braille texts while the teacher gives special help to others in the class.

4.- Use of the braille text should be limited to not more than twice a week.

f. For using graphic material in measuring.

1.- In teaching measures of length, provide rulers and yard-sticks notched at every inch-mark.

2.- In teaching liquid and dry measures, provide containers of the various shapes and sizes.

3.- In teaching weights, use scales.

4.- Provide opportunity for the children to measure, using all these materials.

g. For illustrating numbers by means of blocks.

  1.- Certain children who are slow in grasping the meaning of addition, subtraction, multiplication, and division are helped by use of small cube blocks.

  2.- If two children take 36 blocks, they can divide these into 2, 3, 4, 9, or 12 piles, put them together again, subtract and add, and perhaps in this way gain a better consciousness of number

h. Practical situations in the classroom can be capitalized for their connection with numbers, as:

  1.- The children may be interested in measuring each other's height, and recording on a wall chart.

  2.- Any measurement for projects of construction should be made by children, as measuring for:

    a.- A cage for white mice.
    b.- A classroom museum.
    c.- A large model boat.

  3.- Buying and selling of supplies, as paper, modeling clay, finished handwork, etc., can be taken care of by the children, and accounts kept by children, under the teacher's supervision.

  4.- Handling of money for Tuberculosis Stamps, Junior Red Cross, or similar undertakings should be managed by the children, under supervision.

3. Materials:

a. Text book: Watson and White, Modern Primary Arithmetic D. C. Heath, 1918 - Part III.

  1.- Ink-print edition for teacher.

  2.- Braille copy for each child.

b. Appliances, as mentioned above.

  1.- T, V, L Slate, with type, for each child.

  2.- Rulers and yardsticks, notched in inches.

  3.- Dry and Liquid measures.

  4.- Scales of some kind.

  5.- United States coins.

  6.- Blocks, one-inch cubes, at least 36.

  7.- One model clock with raised figures and hands.

4. Time:

    a. One 35-minute period daily for entire class.

    b. Extra individual work as needed.

VIII. Handwork

1. Objectives:

    a. To help children develop facility in the use of fingers and hands.

    b. To give children additional opportunity to learn good work habits--concentration, determination, good sportsmanship.

    c. To help children feel satisfaction through making useful articles for themselves and their parents.

    d. To give children opportunity to contribute to the appearance of the classroom through their handwork.

    e. To give children additional opportunity to use their ideas in choosing, planning, and constructing.

    f. To provide further opportunity for children to follow directions, oral and written.

    g. To help children develop such skills as basket-weaving, mat-weaving, sewing, knitting, using saws and hammers, using the braille-writer, etc.

    h. To give children opportunity to work together in groups on construction ideas of their own, planning their construction together, choosing the best ways of working, and carrying the work through to a successful conclusion.

    i. To give children opportunity to play table games together.

2. Methods:

    a. Individual work

        1.- Mat-weaving

            a.- Show the children how to string up hand-loom passing the warp through every notch.

            b.- Explain the terms: loom, shuttle, warp, woof.

            c.- Show each child now to hold the loom flat on desk, how to move shuttle with right hand, guiding with the left.

d.- Show the child how to start the following row, reversing the use of hands when moving from left to right.

e.- Show the child how to finish one thread and start another.

f.- Show him how to thread the shuttle.

g.- Show him how to use two shuttles for quicker work.

h.- Show him how to cut and tie fringe.

2.- Leather work

a.- Provide opportunity for children to feel of different kinds of leathers, distinguishing the right from the wrong side.

b.- Provide samples of small articles which the children might make, as napkin rings, purses, etc., allowing children to choose what to make.

c.- Allow child to handle and so become familiar with the work board, punch, hammer, and cut piece from which article is to be made.

d.- If article is to be glued, show child how to use rubber cement, and let him do his own gluing.

e.- Explain use of punch, following depressed line with punch, to make holes for lacing, and let child punch around edges.

f.- Explain use of lacing and lacing stitch, and help child start his lacing.

g.- Show the child how snaps are put on, the function of the four pieces, the tools used, and work with him to fasten snaps in proper place.

h.- Show child how to wax finished article.

3.- Basket-weaving

a.- Provide opportunity for children to handle various kinds of reed.

b.- Explain the use of a base, of spokes, and of weavers.

c.- Show child how to use clippers to cut spokes desired length and how to insert spokes in base.

d.- Show child how to use weaver, over and under, and how to keep weaver damp for use.

e.- Help child keep basket in desired shape.

f.- Show child how to end off weaving.

g.- Help him shellac or paint his basket.

4.- Raffia work

a.- Provide opportunity for children to handle raffia, in single strands and in bunches.

b.- Provide samples of small articles made with raffia, as photograph frames and baskets.

c.- Show each child how to hold raffia between thumb and first fingers and wind it smoothly around framework, guiding with the first finger of opposite hand.

d.- Show child how to finish one strand and start another.

e.- Show child how to finish article smoothly.

5.- Clay modeling

a.- Allow children to play with clay or plasticine until they are familiar with its feeling.

b.- Encourage children who have definite ideas of what they should like to make and allow them to work independently.

c.- For children who "don't know what to make", provide various models, as of turtles, rabbits chickens, etc., helping the child to feel contours on the model and to reproduce similar contours in his own work.

d.- As children gain skill in modeling, encourage clay work along any or all of the following lines:

Working from a model, as an artificial turtle
Working from a live object, as a real mouse
Working from a description, as a dinosaur
Working according to definite technique, as making bowls in the Pueblo Indian way
Working according to original idea

6.- Knitting

a.- Begin with rather heavy yarn (so that it will not split easily) and medium-sized needles.

b.- Knit a few rows first, to give body for the child's attempt.

c.- Knit a stitch very slowly, while the child places his fingers on top to see how the stitch is made. Describe what you do as you do it.

d.- Place the needles correctly in the child's hands, helping him to move needles and yarn in the proper way to make a stitch.

e.- Repeat the process of making one stitch after another, with the child, explaining the process as it goes.

f.- Encourage the child to try the stitch himself, helping him again if necessary.

g.- When the child knows the fundamental stitch, show him how to make a simple article, such as a doll's scarf, strips for a doll's blanket, a scarf for himself, etc., working with softer yarns and pretty colors.

7.- Crocheting

a.- Teach the pupil to make a chain stitch with his fingers, using heavy roving.

b.- Teach him to make the same chain stitch with heavy roving, using a large wooden crochet hook.

c.- Start a round mat, showing the pupil how to use the simple crochet stitch to increase the size of the mat.

d.- Show the child how to make other simple articles, as a crocheted pot-holder or a doll's cap.

8.- Sewing

a.- On felt

Have felt pieces with holes punched where stitches should go. Have children use large needles, heavy thread, and either blanket stitch or simple running stitch to make bean-bag or felt purse.

b.- On oilcloth

Show children how to use first finger of left hand for guiding stitch, while the

needle is held in the right hand. Blanket stitch is most successful on oilcloth. Children may make stuffed bunnies and other toys.

c.- On cloth

Show children how to pin edges neatly together. Help them use guiding finger to make stitches even. Children may make aprons for themselves, costumes for a play, and other articles.

9.- Other miscellaneous work

a.- Fingerpainting (see Mrs. Shaw's book called _Fingerpainting_)

b.- Kite-making (see _Kites That Fly_ by Edwin T. Hamilton)

c.- Paper-weaving (see Bonser and Mossman, _Industrial arts in the Elementary School_ for this and other skills)

d.- Paper-cutting, for the making of Christmas and Easter cards and Valentines, for making party decorations, etc.

e.- Bead-stringing, for decorative design in the classroom.

f.- Making darts and simple airplanes to fly outdoors.

b. Work with the braille-writer

1.- Two children at a time work well with braille-writers, helping each other and stimulating each other.

2.- Introducing the braille-writer technique:

a.- Provide opportunity for the children to handle all parts of the braille-writer carefully. Show which parts can be used for moving the machine, and which parts must be handled very gently.

b.- Explain the use of the six keys and the spacer, with proper fingers on the keys.

c.- Give the children practice in pressing the keys according to the braille dot desired, as "dot 6, dot 3, dot 1, dots 1 and 2."

d.- Give children practice in making simple letters, as A, B, L, P, and combining the the simpler letters into words.

e.- Allow children to practice more complicated letters and contractions, according to their desire to try these.

f.- Encourage the writing of many words over and over,

g.- Encourage the writing of short sentences.

h.- Encourage the use of the braille-writer for some of the regular school work.

Children should not use the braille-writer altogether, since it is important that they retain their skill in using slate and stylus.

c. Table games

1.- Encourage the use of table games occasionally in the handwork period.

2.- Show the children how to play certain embossed games, such as Anagrams, Symbolo, Dominoes, and others, and help them enjoy these games.

3.- Encourage the use of map puzzles and other jig-saw puzzles.

d. Group construction work

1.- In all group construction work, abide by the principles of group planning, group choosing, and group carrying-out of plans.

2.- Encourage the children to offer ideas for group construction and act upon their ideas.

3.- Utilize whatever branches of construction work are possible, as

a.- Work with papier-maché (for maps, table scenes, etc.)

b.- Wood work (as in the building of cages for small animals, classroom museum, etc.)

c.- Making of scenery and costumes for plays.

d.- Cooking

e. Some general principles for all branches of handwork.

1.- Emphasize colors. Be sure the children know what colors they are using and how the colors enter into a pattern, if this is the case.

2.- Encourage the children's choice of pattern and design for any type of handwork.

3.- When a child has learned a new skill, encourage his using that skill again, in making another article or in teaching a classmate how to do it.

4.- Encourage children to use whatever hand seems easiest for various work. Left-handed children should be shown the same techniques from a left-handed point of view.

5.- Encourage the finishing of one piece of work before the starting of another. However, do not enforce this principle if other values are foremost.

3. Materials - as listed above.

4. Time:

a. At least one 45-minute period every day.

b. Occasional additional time when it is important.

IX. Problems of Personality Adjustment

1. Objectives:

a. To offer each child security in the classroom.

b. To offer every child a friendly, happy atmosphere.

c. To encourage children to take responsibility.

d. To encourage children to join cooperatively in group endeavors.

e. To encourage children to make choices, and to make them increasingly well.

f. To offer each child a chance to do work well.

g. To help each child acquire natural ways of walking, standing, sitting, using hands, etc.

h. To pay particular attention to individual needs, such as the necessity for relaxation in one child, for self-assurance in another, and for freedom from worry in another.

2. Methods:

a. Always put needs of individuals first.

b. Offer areas for choice wherever possible, throughout the school program.

c. Make every effort to build up an atmosphere of respect for personality between teacher and pupils and among pupils themselves.

d. Encourage "good ideas", helping the pupils act upon these ideas wherever possible.

e. Pay especial attention to a "good idea" which involves the whole class, encouraging the group to talk over and act upon the proposal of one member.

f. Make a definite arrangement for "free time" regularly, if only once a week, and give children opportunity to use this time to advantage.

   1.- Encourage children to find many things to do in this free time.

   2.- Encourage them to choose from these many opportunities the thing which they particularly want to do and which is important to them.

   3.- Endeavor to develop self-reliance and independence.

   4.- Help the children develop the habit of exploring, testing, and experimenting.

g. Make an opportunity early in the year for each child to do some extra work, if only as a means of getting acquainted.

h. Make other opportunities from time to time for individual pupils to do some special task or to use some special privilege, and thus get better acquainted.

i. Be sure that the children know where to come for help or for casual conversation, if they so desire.

j. Meet the parents and talk over with them the individual problems of their children. Enlist their help.

3. In conclusion:

It seems to be, after all, only as a force for developing persons that school classes exist and function. The third grade curriculum is in reality the life of a third-grade child, including all the things which are important to him. As the events which go on inside a third-

grade room grow out of the lives of the children and help them to face and deal with the situations of their lives, so will the curriculum be meaningful to these children. Knowledge about the world in which they live, techniques for living in this world intelligently, practice in living together happily and constructively--these things are important in the third grade curriculum because they are important in the life of every child.

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A THIRD GRADE PROJECT

A STUDY OF THE EARLY WORLD

Grade III - New York Institute for the Education of the Blind

Introduction - How the Study Came About

The third grade teacher, making plans for the class before the opening of school, had arranged for a long period each morning devoted to a unit called "A Study of Our World." This study, she thought, would include the work of geography and natural science for the grade, and would be closely allied with the language work and writing ~~periods~~. How the study might begin and what its trend would be she felt rested to some real degree in the interest and questions of the children themselves.

Knowing fairly well the usual interests of third grade children the teacher had prepared for this study by looking up information and materials on a number of different subjects. Such things as the following might, she felt, be the starting place of the year's work:

Our immediate community - our school
Our wider community - the city and its surroundings
How the world began, and the first people
Water - its importance to us
    the rain cycle
    life in the water: fish, crabs, etc.
Our food
Our clothing
Child life in some other country

The purpose of a study of the world based upon such topics as these and carrying through the entire year was ~~a~~ four-fold ~~purpose~~. The teacher hoped that this study would offer to third grade children:

1. A fund of knowledge of various interesting aspects of the world;

2. An elementary understanding of certain elements that are important to us in our living, as food, water, and clothing;

3. An appreciation of some of the peoples in the world who, though different from ourselves, are surprisingly like us i their work in the world, their needs, and their achievement

4. An integrating factor in the pursuit of such drill subjects as language work and writing.

Upon the meeting of the class on the first day, it became evident through a general discussion that the interests of the boys and girls were indeed wide and varied. The children were encouraged to ask questions under the heading of "Things We Wonder About," and a countless number of these questions involved the world about them. Some are given:

How can water hold you up when you go swimming?
How can trains go under rivers without getting wet?
Why are there jellyfish and crabs in the water?
Where does the Hudson River start?
How do potatoes grow?
How did vegetables start in the very beginning?
How did the whole world start?
What was here before the world?
What is inside of the earth?
How are the rocks formed?
Where does sand come from?
What's above the sky?
Why can fish live in the water, and not people?
How did salt get into the ocean?
How did fish get into the ocean?
Why does it rain?
Who first thought of making books?
How do people make paper?
How do they make glass, and who found out how?
How did men build the George Washington Bridge and the Holland Tunnel?

Many more questions were asked, and noted down, but from them all there seemed to be a particular interest in two things: water, in all its aspects, and how the world began. From this lead the study was launched.

Particular Purpose of a Study of the Early World

In developing a study of the early world, the teacher had in mind two sets of purposes, those relating to the acquisition of knowledge and those relating to the growth of certain skills. She hoped that the children would gain elementary information about:

- The origin of the earth
- The beginning of forms of life
- The needs of living things
  - Proper environment
  - Food
  - Growth
- The importance of water in the world
  - The rain cycle
- The first people
  - Tree-dwellers
  - Cave men
  - How they lived and how they met their needs

With regard to skills, she hoped that the children would learn to:

- Use all their resources in gaining information, by:
  - Reading individually
  - Listening to material read in class
  - Asking questions at home
  - Listening to conversations around them
  - Noting relevant information coming over the radio

Organize oral reports of information gained, for the
    benefit of the class

Put some of the information gained into graphic form, by:
    Individual written reports
    Written reports by the entire group
    Use of clay and other plastic materials
    Dramatic play

The teacher also hoped that during this particular study a wholesome attitude might be built up toward work in general. She hoped that the children would enjoy their study, that they would want to work hard to find answers to their questions, that they would develop useful habits of work, and that they would find their study so absorbing and so thrilling that they would want to share some of their results with other groups of children in the school.

Materials Used in the Study

While there is some excellent material in print for the use of children in a study of the beginnings of the world, little or none of this is available in braille. In order that the children could do any research on their topic for themselves, it was necessary for some material to be transcribed into braille for them. Other information was read to them, either to the entire class or to small groups that afterwards reported to each other.

The list of books that were used follows. Only the relevant sections of the following books were used, sections dealing with the origin of the world and primitive life in the world. Books marked with a star (*) were read in full or almost in full. Those marked with an X had sections transcribed into braille and were read by at least some of the children.

Books that were used:

Boyle, Mary E., "Man Before History," Little Brown and Co., 1924
Brigham and McFarlane, "How the World Lives and Works," American Book Co., 1933
*X DeSchweinitz, Karl, "Growing Up," MacMillan, 1932
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X Hartman, Gertrude, "The World We Live In", MacMillan, 193
Hillyer, V.M., "A Child's History of the World", Century Co., 1924
* Mohr, Louise M., "Days Before Houses", Rand McNally, 1928
Reed, Maxwell, "And that's why....", Harcourt Brace, 1932
* Rifkin, Lillian, "Our Planet the Earth: Then and Now", Lothrop, Lee, and Shepard Co., 1934

Besides literary materials, certain construction materials were important in the pursuit of this study. Their use is further explained later. The materials of this kind used were:

Modeling clay
Materials for papier-maché
Reed for baskets
Wool and hand looms for weaving
Materials for a wall chart

Exhibits sent to the group from the American Museum of Natural History were very valuable in the work of the class. These were exhibits of early stone implements and articles of bone from the Stone Age, samples of the earliest basket work and metal work, and primitive tools and ornaments from an aboriginal tribe in the Phillipine Islands today. These various exhibits were borrowed for a period of a week each, so that the children had ample opportunity for using them in their study.

Methods

Four methods were used in developing the study of the early world in this third grade. There were: (1) discussion, based upon individual reading, reading to the group, reports from home and from the radio; (2) an excursion to the American Museum of Natural History; (3) graphic representation of parts of the study; and (4) assigned oral reports, written reports for the individual notebooks, and oral and written tests. A combination of two or more of these methods often made up the day's work in this field.

(1) Discussions

In developing meaningful discussion with the third grade, the teacher used the following technique. First, informational material was presented to the class, either read by the teacher or read by the children themselves. Then this material was reviewed and summarized. New questions were presented by the teacher, questions that the children might think through with the information on hand by using their reasoning powers. After a full discussion of the problem, all the children offering what ideas they might have on the subject, the teacher either read material summarizing the problem or offered her own summary gathered from readings of her own. To show how this was done, a typical discussion is reproduced here.

The topic under discussion was: Who were the first people and how did they live? On the previous day the children had given a long list of questions about the first people on earth, some of their questions showing an understanding of the conditions under which the first people must have lived (as: Were they afraid of the big animals?) and other questions showing a great lack of understanding (as: How did they know how to speak English?). On the day in question, the teacher divided the class into three groups, each using different material. One group, composed of the three best readers, was given braille material taken from "The

Tree-Dwellers" by Dopp. Each of these three children had a different section to read, and exchanged with each other as they finished. Another group listened to the reading of a chapter on The First Men read by the teacher from "In the Beginning" by Erleigh. The assistant in the class read to the third group a chapter on the first people in Hillyer's "Child's History of the World." When the reading was completed, each child in the class gave a short report on something interesting he had found out about the first people, and additional information was offered voluntarily when the more formal reports were finished.

The teacher then asked the question: What do people need in order to live? The discussion proceeded thus:

Richard: Everybody has to have food in order to live.

Willard: And the tree-dwellers had a hard time getting food. They could only eat roots and berries and sometimes they even ate the bark of the tree, they would get so hungry.

Andrew: I think that if they lived in trees, perhaps they could sometimes catch a bird to eat. Only I don't think it would be very good if it wasn't cooked. Did they know how to cook?

Teacher: Did you hear anything about these people cooking their food?

Carmella: No. What I read said they didn't know anything about fire at first.

James: Well, if they lived in trees, maybe they could get birds' eggs to eat. Some people now eat eggs without cooking them. My mother makes me egg-nog, and it's not cooked.

Frank: Anyway, I don't think they had very much to eat. They must have been hungry an awful lot of the time.

Teacher: What else do people need in the world besides food?

Mary: Everybody needs water. They need water to drink and to get washed in.

Bob: Maybe they didn't get washed.

Mary: Well, then I think they must have been pretty dirty!

Andrew: They did have to have water to drink. But they had to wait until they were sure there weren't any animals around before they got a drink. Animals have to have water to drink, too. The tree people would be afraid to go to the river when the animals might be there.

Richard: That reminds me of something else that people need. They need safety.

Teacher: Indeed they do. How did these first people try to keep safe from harm?

Richard: That's why they lived in trees. Most of the big animals couldn't climb the trees, and the people were safe there.

Bob: I think they took branches of trees with them, and big sticks, when they went on the ground.

Frank: Maybe they had guns.

Bob: No, they didn't have guns! Where would they get them? These people were the first people. They didn't know anything much.

Carmella: Well, they knew something. They knew enough to live in the trees where they would be safe.

Andrew: I think they were pretty smart. They didn't have anyone to teach them what to do. They had to think things up themselves.

Teacher: One thing that made these first people different from the animals was that they knew how to use their minds. You have said that people need food and water and safety in order to live. What else do they need?

Frank: Air.

James: They'd get plenty of that, living in trees.

Willard: Everyone has to have sleep. And I don't think it would be very comfortable sleeping in a tree.

Mary: People need warmth, too. But I don't know whether the tree people knew how to make a fire.

Teacher: Did they know how to make a fire, or how to use fire?

Carmella: No. They didn't have any fire at first.

Mary: How did they keep warm, then?

Teacher: How could they keep warm?

Several: Clothes keep you warm.
Houses keep you warm.
The sun keeps you warm.

Richard: Well, I don't think they had clothes, and they didn't have any houses, but the first people could keep warm in the sun.

Andrew: I think they would try to live in a warm place, like Florida, where it never gets very cold.

James: They never could live where it gets very cold. They'd die.

Teacher: I think that you may be right. Probably the first people did live in a part of the earth that was quite warm most of the time. We don't know exactly where the first people

did live, and even scientists can only try to imagine how they lived. The books we have been reading are the ideas people have about what must have been true.

How many things, then, have we thought of, that people need in order to live?

James: Food, and water, and air, and sleep, and warmth.

Bob: And safety. Don't forget that.

To conclude the discussion, the teacher read from Hartman, "The World We Live In," a short paragraph which summarized these very things. A page written later by the children individually for their notebooks put the results of the discussion into more permanent form for their reference in the future.

There were many discussions throughout this study of the early world, surrounding topics such as these:

How the world began
The first life (one-cell organisms)
The first plants and forests
The amphibians
The development of fish
The first animals
The importance of water
The rain cycle
How salt got into the ocean
How new life develops (reproduction in plants, fish, birds, and mammals)
How cave people lived and how they met the conditions around them
The ideas cave people had about their world

Sometimes children brought in from home information that was quite in keeping with the work of the class, and this, too, formed the basis of group discussion. When the rain cycle was under discussion, James remembered something his father had told him during the weekend about the condensation of water on pipes in the cellar. When the class was talking about large animals and queer animals, Andrew contributed some interesting information about the animals of Australia described to him by his father. When the newspapers were telling of the earthquake in Montana, the class reviewed one day their earlier discussion of how the world was formed and what is inside the earth. From all such discussions as these, the work of the class took on additional meaning and interest for the boys and girls.

(2) The Excursion to the American Museum of Natural History

While the information gathered in various ways and from a variety of sources was interesting and valuable to the children, the teacher felt that a closer contact with the primary sources of information would be of great worth. Through the cooperation of the Educational

Department of the American Museum of Natural History, it was possible for these children to examine actual relics of the Stone Age and to have them explained by people who have spent a great deal of time in studying that period. The Stone Age relics sent to the children at school for closer examination were then more meaningful and interesting to them. An additional opportunity to visit the Dinosaur Room and to hear new information about the great monsters of the early world made the excursion even more worth while.

The report of their trip, dictated by the group and transcribed into braille for them, tells how the children felt about the excursion

"OUR TRIP TO THE MUSEUM"

"On Monday we planned our trip to the American Museum of Natural History. On Thursday we were excited and happy. This was the day we had planned to go.

"After we put on our coats and hats, we waited outside for the bus. In about five minutes the bus came. We divided into teams so no one would get lost. What fun we had on the bus! We saw a fire engine racing down the street, with the siren and bell making a terrific noise. We rode across the Harlem Bridge. Then we were in Manhattan. Finally we came to the Museum, where we left the bus.

"We went through the main floor to the elevator and up to Room 203. We met Mr. S---- there. He showed us many things that people long ago used to use. He told us about the Stone Age and how people lived then. He showed us many things from that time: stone axes, spear heads, awls, a flute, a spindle, a chisel, a pipe, beads, a dagger, arrow heads, hammers, a barbed harpoon point, a scraper, a knife, a very large and heavy axe, a bone needle, some pottery pieces, and an ornament stone. Some of these things were made of stone, some of bones, and the beads were rock, bones, and shell.

"When we left Room 203, we went to the Nature Room. There were several animals in the room. There were two kinds of squirrels, a blue jay, a turtle, a horned toad, a hooded white rat, a snake skin that had been shed by a snake, and a western bull snake in a show case. We all laughed at a funny thing Willard did. He put his hand on a horse-chestnut that was all covered with thorns, and how he jumped!

"From here we went upstairs to the fourth floor. First we saw the skeleton of a long jaw mastodon. We felt his legs and his jaw and his long tusks. We could not feel his back; it was so high that we could not reach it. In a glass case some of us saw a metal statue of an early cave man.

"In another room we saw a dinosaur that measured 66 feet and 8 inches long. When he was alive, he weighed 80,000 pounds, or 40 tons. We could feel up to his knees. One of his toes was as long and as thick as your arm. His legs were as thick as a tree-trunk. All he ever ate when he was alive were plants and branches of trees. He was a vegetarian. Another big animal had two legs instead of four, and a long tail. He was carnivorous; that means he ate meat.

"We went back to the main floor and through the winding door. We got home at about a quarter to twelve. It was a morning full of fun

(3) Graphic representation of parts of the study

Certain parts of the study of the early world were represented through such media as clay modeling, wall charts, and dramatic play, in order that the information should be clarified in the minds of the children and in order that it might make an impression upon their memories. Thus, in the beginning of the study, when the class was discussing the first life, the one-cell organisms, each child made a clay model of the amoeba, at his desk. From the clay model, the teacher could show each child how the amoeba absorbs food, how the projections change shape, and best of all, how the organism divides to make two and then four and then eight organisms of the same kind. The next day the children each made a model of the paramoecium, showing the development of life in differentiating the front of the organism and in the structure of a mouth with which the organism might eat. One model of the amoeba and one of the paramoecium were mounted on heavy paper and put on the bulletin board, with a braille label explaining them, prepared by a member of the class. Shortly after this, every child in the class made one or more clay models of pre-historic animals, making a Pre-historic Parade along a table in the front of the room. The animals were made entirely from descriptions that had been read and from what information had been gathered at the Museum, and many of the animals were remarkably like the pictures one sees of dinosaurs, brontosaurs, and ichthyosaurs of an early age.

On several occasions while the class was studying the life of the cave men, a few minutes were taken for informal dramatic play. Louise Mohr's book, "Days Before Houses," is full of stories and incidents that make good plays, and the children enjoy acting out some of the stories they were reading. The story of how a cave boy saved his friend from the animals by brandishing a lighted torch in the faces of the bears provided plenty of action for the children. This in itself is valuable for children who are more or less prone to sit in chairs and listen, rather than run the risk of bumping things as they move around. Playing the story was also valuable in the light of helping the children to take on the characters of the early people. In imagining for themselves the dangers of the cave man's life and his eternal fight to keep alive in the world, the children were able to appreciate a little better the needs and the achievements of these people who lived in caves.

The most extensive work done by the class in representing their work in graphic form was the construction of a large scene depicting the life of the cave man. The children thought of making the scene, and worked out most of the methods by which this might be done. The teacher's chief contribution was in guiding the work, in seeing that every child was working on some part of value to the entire project, and in offering the technique of making papier-maché. The children worked on their scene in the handwork period and at odd times for days, adding here and there a new section as they found new information about the life of the cave man age.

When it was finished, the scene looked very real. The children had used papier-maché as the base, coloring it with blue crepe paper to make the river and stream, brown crepe paper to make the sand, and

green crepe paper to make the grass. A committee of boys had collected stones with which they constructed the cave, while another committee gathered twigs and sticks to erect along the back of the scene and give the impression of the edge of a forest. Near the woods and on the edge of the river were many wild animals: deer, cave bears, an elephant with a young elephant by her side, snakes and turtles, and queer monsters lurking among the trees. A young boy sat by the side of the stream fishing with a spear, at his side a fish he had caught already. Two men were walking toward the cave with a long stick between them, a cave bear fastened by his feet and hanging from the pole. Another man was running forward with spear ready to throw at an animal running before him. In front of the cave was a group of women cleaning a leather skin, while another group was filling a tiny basket with nuts and wee acorns. A fire burned brightly near the door of the cave, and several people seemed to be cooking at the fire. The animals and people, made of clay, were very real, and showed the action of this primitive scene. A rabbit munching the moss on top of the cave and a squirrel perched in the notch of a tree were important additions to the scene. The children were very proud of their work when it was done, and used the scene as the basis of an assembly program held later for the other children in the school.

(4) Reports and tests

Since it seemed necessary for the teacher to know whether the children were absorbing and remembering the information gathered in this study, a system of reports and tests ~~were~~ was devised for the members of the class. These usually took place on Fridays, and summarized the week's work or the work of more than one week. Sometimes the summary was in the form of oral assigned reports, sometimes in the form of written paragraphs, sometimes in a quick question-and-answer drill, and once by means of a true-and-false test.

On the occasions in which oral reports were assigned to each child, braille copies of the individual assignments were passed out and the children were given time in which to think through carefully their answers or reports. One Friday the assigned reports covered the following subjects:

Andrew: How the world began
Frank: How water came on the earth
Willard: How rain occurs on earth
Carmella: The first forms of life
James: Mighty animals
Mary: The first mammals
Bob: How the first people lived
Richard: How the first people used their minds

The boys and girls themselves checked upon these reports from the point of view of accuracy of information as well as from the standpoint of good English and an interesting manner of speaking.

The assembly in which the third grade shared part of their work with the first and second grade children was built upon this same system of individual reports. The younger children were invited to a special assembly to see the cave man scene, while the third

grade boys and girls gave talks on their work as follows:

Mary: Announcer
Willard: How the world began
Frank: How cave people lived
Richard: How the cave people hunted
Frances: How they learned to use fire
James: How the cave men used their minds
Carmella: What they thought about spirits
Bob: How we made the scene
Andrew: What we have put in the scene

Paragraphs written by the children individually on the topics they were studying became a part of the regular writing lesson for the grade. The pages that were well written and that contained accurate information were put together with loose-leaf rings, so that each child had a notebook on this study of the early world. One boy had his notebook divided into five sections which he labelled:

How the World Began
The One-Cell Animal
Mighty Monsters
The Tree-Dwellers
Cave People

The notebooks differed in content, but each showed to some degree the interest of the children in the work and kind of information that they were gathering and remembering from day to day.

At the end of their study, the children were very much interested in a true-and-false test that was given to them. The test was made up of twenty-five statements such as:

Cave people knew how to use fire.
Cave people lived in log houses.
Cave people believed there were spirits all around them.

The teacher read each statement twice, and the children wrote on their braille slates either T or F, depending on whether they thought the statement true or false. Many of the statements were not easy, but most of the children did remarkably well on the test.

Much more interesting to the children, however, as they finished their study, was a comparison they made of the questions they had asked about the early world and about the first people with the information now at their disposal. The children were delighted to find that they could answer every single question they had raised in the beginning. This, more than anything else, seemed to give the boys and girls a sense of achievement in a piece of work well done.

Integration of subject matter

As has been noted from time to time, this study of the early world was more than a study of information within a certain field. The correlation of this unit with the class work in language and

in writing was very close. The children wanted to speak well in order that their reports on the parts of the study would seem acceptable to the rest of the class. Bob tried very hard to speak slowly and clearly so that the others would enjoy listening to what he had to say. Carmella remained in the classroom of her own accord at one recess period to straighten out the use of was and were in a report she planned to give the following day. The children were eager to speak accurately for the enjoyment of others in telling about their work from day to day.

Three poems were connected with the study of the early world. One, "The Cave Boy" by Laura E. Richards, was directly linked to their discussion of the life of the cave people. A copy of this poem was transcribed into braille for each child, and several of the children memorized all five stanzas because they liked the poem. Another, "The Animal Store" by Rachel Field, was introduced on an occasion when the boys and girls were talking about animals today, and was memorized by everyone in the class. The third was a very difficult poem, "The Petrified Fern" by Mary L. Bolles Branch. The teacher would never have selected this for third grade children under ordinary conditions, but in this connection it seemed that the group might appreciate much that is in the poem. Two well-defined specimens of fossil ferns had been sent from the Natural History Museum, so that as the poem was read the children were able to trace with their fingers the veinings and leafage of a real petrified fern. The boys and girls liked the poem so much when they heard it, that they asked to have a copy in braille and afterwards read it, from time to time by themselves.

A great deal of the class work in spelling and writing was closely correlated with the unit on the early world. Mention has been made of the notebooks kept by each child. Only material that was well written was allowed to be put in the notebooks, and since the interest in the study was so high, the writing improved markedly from the beginning of the term. Often the children re-read their notebooks, in spare minutes, and decided upon the material that should be written down next to make the story complete. Some imaginative material was included together with reports on facts, making very interesting notebooks in several cases. Written drill on the use of question marks and on the writing of quotations also crept into the notebooks, as the boys and girls felt that sentences like the following would not be out of place:

> "I like to hunt," said Dart.
> "I like to fish," said Wolf.
> "I must make a new basket," said their mother.

The material that had been put into braille for the use of the children, as "The Tree-Dwellers" and "The Later Cave-Men," provided practice in reading outside of the regular reading periods. Some of the children took sections of these and the other books home over a week-end, to read in their spare time, while others read parts of the books in a free period in the classroom. When the transition was being made from Grade 1 to Grade 1½ Braille, the teacher wrote out sentences from these same books for special drill for those who needed it. In many ways, extra work in reading was motivated through the interest in the study of the world.

The accomplishments of the handwork period were often linked closely with this same study. Much of the clay modeling had a direct connection with the study of one-cell organisms, pre-historic animals, or the life of the cave man. In addition, the children made woolen mats on a hand loom during this time, while several learned to make baskets of reed. Each child also made a leather napkin ring of a simple design. Their work with leather, reed, and so on, helped them to understand how these primitive crafts might have originated in a very early time.

Leading-on interests

As the study of the early world approached a close, it became evident that the interest of the children would carry on in several ways. Their continued interest in reports coming over the radio showe that the boys and girls were finding more meaning in some of the thing to which they were listening at home. Also, they were asking more questions of their fathers and mothers, and continued to bring into the classroom bits of information more or less connected with the study upon which they had been engaged.

Two kinds of construction work were the direct result of this period of study. The first was the making of a cage for white mice, followed by the purchase of a pair of white mice for the classroom. This incident arose from the strong interest in the various forms of life on the earth and the desire to have some small animals that they could tend. The second construction work was the building of a museum for the classroom, in which the members of the class might keep their treasures as the large museums keep interesting objects for people to see.

A growing interest of larger proportions than these was a lively interest in the life of the Indians of our own country. As discussion of the cave men proceeded, the children began to make comparisons with what they knew of American Indians. They began to ask many questions--"Did the Indians sew leather this way?" "Did the Indians know how to catch big animals?" The questions of this kind were notec by the teacher, and were kept as possible leads in a study later in the year of the life of the American Indians.

Evaluation of the study

In the light of the purposes suggested at the beginning, it seem that much of value was accomplished in this study of the early world. The children did indeed gain a fund of information about a very interesting aspect of our world. They also gained some understanding of the importance of certain elements in our lives--food, water, clothin shelter--and began to understand the effort of humanity to satisfy these needs. The boys and girls gained in appreciation of the achieve ments of the people of the early world. Moreover, this study became the integrating factor for much of the routine work of the third grad

In addition to these things, the teacher felt that there was a distinct improvement in the children's methods of attacking a problem. At the end of the study, all of the children knew better how to ask

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PRACTICES AND PROCEDURES IN SECONDARY SCHOOLS FOR THE BLIND IN THE UNITED STATES

By

Margaret Elizabeth Martin

Dissertation

Submitted in partial satisfaction of the requirements for the degree of

Doctor of Philosophy
in
Education
in the
Graduate Division
of the
University of California

Approved:

Professor L. A. Williams, Chairman
Dean W. W. Kemp
Professor Leon J. Richardson
Professor Oliver M. Washburn
Dr. Richard S. French

Committee in charge

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Chapter One

Introduction

I. The Problem

The general public possesses very inadequate knowledge concerning the blind; they are accustomed to regard them as a people in a class by themselves. Adults and children are grouped into the same category and labelled "blind;" they are not considered as normal human beings; their blindness is believed to be a handicap that is insurmountable. As a consequence, they are expected to lead passive lives, to be a group that is set apart, and society continues either to "neglect them or to treat them emotionally and vicariously."

The purposes of schools for blind children are likewise too frequently misunderstood. These schools are still often designated as "blind asylums," "blind homes," etc. by the layman. They are commonly supposed to give instruction chiefly of a vocational nature, such as: broom-making, basketry, weaving, etc., or they are expected to produce musical geniuses. Such erroneous conceptions are born of ignorance concerning the true situation with reference to the education of the blind.

Undoubtedly, there lurks within the walls of some

of these schools a certain degree of ignorance relative to practices and procedures pursued in other schools for the blind. A comparison of these matters enables superintendents and teachers to obtain a perspective on existing conditions in their respective schools with a view to self-analysis. The more progressive schools will not be found shackled by useless tradition and discarded educational theories. They will be found to have replaced methods based on pseudo psychology and unsound philosophies of education by newly developed and newly developing methods that are in consonance with the new conception of education as a process of guiding individual development. They will not be found engaged in practices that suppress and subordinate the individual capacities of their students, but in these progressive schools will be found significant provisions for the recognition of individual differences by such means as small class groups affording opportunity for individual instruction where such procedure is advantageous. They will be found to be engaged in efforts to organize the program of studies with a view to "recreating the world of the seeing in terms that the blind can understand."

In a general way, this study aims to clarify some of the rampant misconceptions concerning pupils in schools for the blind. Throughout this study blind students will be considered as boys and girls with certain individualities resultant from their varying degrees of

blindness. The index of each student's ability and performance is found in his native capacity and educational opportunities rather than in the fact that he is blind.

Specifically, the aim of this study will be to discover and to compare the present tendencies in the conduct of secondary education in schools for the blind in the United States. Special emphasis will be centered on the variations of procedures which have occurred in these schools during the period 1921-1931 with respect to (a) organization, (b) administration, (c) curricula, and (d) methods.

II. Previous Studies

Three previous studies have briefly treated some of the problems presented in this investigation. The earliest study of this nature is entitled "Organization and Administration of the Schools for the Blind in the United States" by Harold C. Harter. This is a master's thesis written in 1916. It is an overview survey of organization and administration in this type of school but it does not differentiate between elementary and secondary schools.

Part Three of *The Blind* by Harry Best is devoted to "Provisions for the Education of Blind Children." It is an excellent presentation of data up to the year 1919.

Richard S. French's recent book *From Homer to Helen*

Keller deals with problems connected with the blind both historically and critically. In the several chapters devoted to the education of the blind particular attention is given to such matters as special methods, vocations and avocations, and social aspects of the blind as related to their education. This book is the most comprehensive history of the blind that has thus far been written.

The emphasis in the present study is on practices and procedures in secondary schools for the blind in this country, particularly with respect to the period 1921-1931. It is the first attempt to collect all comparable data for this period with regard to organization, administration, curricula, and methods in secondary schools for the blind in the United States.

III. Justification of the Study

The study is more than a compilation of statistical data and an assembly of facts in convenient form pertinent to education in the secondary schools for the blind in this country. In addition to making available widely scattered but closely related material and presenting new data, new norms will be established and fundamental principles will be evolved. The true status with reference to practices and procedures in secondary schools for the blind has been sought and an analysis of the

findings will be made.

By means of the comparable data presented, the various residential schools for the blind should be able to compare their own practices and procedures with the norms established, which should lead in turn to the development of better standards for all.

Furthermore, it is hoped that this study will be of direct service to students, parents, guardians, school officials, and others who wish knowledge about the several schools in particular as well as about the more general conditions affecting schools for the blind.

IV. Definitions and Delimitations

This study includes those institutions for the blind which are usually classified as: "state schools for the blind," "dual state schools for the deaf and the blind," and schools for the blind which are supported by private endowments supplemented by subsidies from the State. All of these schools are public. There are no private schools for the blind at the secondary level in the United States. It was a part of the original plan to include data with reference to schools for the negro blind but as the investigation proceeded, it became increasingly evident that justice could not be done to these schools since reliable information concerning them was so meagre.

Children who are totally blind or who have vision

so defective as to render an education by ordinary methods impracticable and who are capable of receiving instruction by the methods pursued in these various institutions are eligible to admittance to schools for the blind. It is with secondary schools conducted for such children that this study is concerned. Institutions whose prime purpose is expressed by the phrase "sight conservation" were not included in this investigation.

By secondary is meant that portion of an educational institution for the blind which when organized on an 8-4 basis includes grades nine to twelve, or any one or more of such grades, but when organized on an elementary, junior high school, senior high school basis includes grades seven to twelve.

The word institution is used synonymously with the word school, connoting an establishment whose only purpose is educational.

V. Sources of Data

The primary sources of data used in this thesis include official reports and bulletins published by: (1) the forty-two different schools for the blind, (2) the United States Office of Education, (3) the American Foundation for the Blind, and the complete files of *The Outlook for the Blind*, New York, American Foundation for the Blind, published quarterly, 1907-   .

The secondary sources of data used include: books, unpublished theses, personal correspondence with the officials of the institutions under investigation, and survey sheets sent to these institutions. Further personal correspondence was carried on with outstanding authorities in the field of the education of the blind.

The following books have been of material assistance:

Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, pp. 375.

Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1926, pp. 347.

French, Richard S. *From Homer to Helen Keller.* New York: American Foundation for the Blind, 1932, pp. 298.

Best, Harry *The Blind*: Their Condition and the Work Being Done for Them in the United States. New York: The Macmillan Co., 1919, pp. 763.

Proceedings of the World Conference on Work for the Blind. New York: American Foundation for the Blind, 1931, pp. 558.

VI. Procedure

An analytical survey of the documentary material was made year by year for the period 1921-1931. The data thus obtained were checked and classified by personal correspondence and survey sheets sent to the various schools for the blind, by personal interviews when possible with officials of these institutions, and by the use of all the available studies pertinent to the

topic.

A large part of the data has been collected into tables to reveal variations which have occurred with respect to (a) organization, (b) administration, (c) curricula, (d) methods, and the results have been compared and contrasted to show any tendencies in regard to other matters.

Norms have been established by determining the common practices in the schools studied and these normal practices have been judged in terms of public secondary school procedure with reference to these matters. Principles involved in these practices have been discussed and evaluated.

VII. Scope of the Study

For the purposes of convenience the material of this investigation has been treated under four subdivisions; namely: The Setting of the Problem, Physiological and Psychological Aspects of Blindness, Organization and Administration, and Curricula and Methods.

Chapter Two

The Setting of the Problem

I. Forces and Agencies Influencing the Education of the Blind

1. History of the Education of the Blind in the United States

There is an ever increasing interest shown toward educational work among handicapped children. A proof of this statement is the fact that a very important part of the White House Conference on Child Health and Protection was devoted to the needs of these children.[1]

Interest in the education of the blind has increased immeasurably within the past two decades especially in the United States. The achievements accomplished during this period have attracted the attention and admiration of large numbers of men and women in all parts of the world. The World Conference held in New York City in April, 1931 bears testimony to the sincere interest that is evidenced in America's educational work with her blind children.

Other factors of prime importance indicative of this

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[1] White House Conference on Child Health and Protection. Special Education: The Handicapped and the Gifted, Section III, "Education and Training." New York: The Century Co., 1931, p. 3.

focusing of attention on the education of the blind are the extension of the application of compulsory school laws to affect blind children in more than 75 per cent of the states and the determined effort on the part of many State and local officials in cooperation with officials connected with institutions for the blind to enforce these laws.

The detailed history of schools for the blind in the United States has already been treated by two prominent writers in the field.[1] Nevertheless, for the sake of completeness, it may be well to present a brief sketch of the outstanding features characteristic of education for the blind in the United States from its earliest beginnings to the present time.

The history of the education of the blind in this country manifests in a striking manner a continuity of progress. This continuity strengthened from time to time by the introduction of new movements, new inventions, and new leadership extends over a period of one hundred years. During this period there have emerged six stages of development.

The first stage centers about the founding of the

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1. Best, Harry. The Blind. New York: The Macmillan Co., 1919, pp. 253-392.

   French, Richard S. From Homer to Helen Keller. New York: American Foundation for the Blind, 1932, pp. 298.

three pioneer schools in America which started almost simultaneously. The year 1832 is significant in the history of the education of the blind in America as the two earliest schools were opened during that year and plans were initiated for the opening of the third one which took place in 1833.

The New York school for the blind, called the New York Institution for the Blind, opened its doors on March 15, 1832. Dr. John D. Russ was its first superintendent and three boys whom he found in an almshouse were its original students.[1] The school was made possible at first by private contributions, which were supplemented in 1838 by State aid.[2]

Perkins Institution and Massachusetts School for the Blind began in July, 1832 under the name of the New England Asylum for the Blind. Dr. Samuel G. Howe was placed in charge of the school. Six children from indigent families were obtained as a nucleus for the school.[3] The school was temporarily established at the home of Dr. Howe's father in Boston. It was supported by means of

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1. French, Richard S. op. cit., p. 121.

2. Van Cleve, Edward M. "The New York Institute for the Education of the Blind." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, pp. 615-617.

3. Annual Report of the Trustees of the New-England Institution for the Education of the Blind. Boston: J. T. Buckingham, 1834, p. 4.

State appropriations and private contributions.[1]

This institution was particularly fortunate in gaining the services of Dr. Howe. He was a man with unusual organizing ability, diversified experience, splendid intellectual capacity, and a deep interest in humanity. From its earliest inception this school has been a leader in educational activities among the blind.

The Pennsylvania Institution for the Instruction of the Blind was founded in 1833. Dr. Julius R. Friedlander, a German experienced in educational work among the blind, became the principal.[2] Eleven pupils were admitted the first year. Permanent quarters were established in Philadelphia in 1836 which accommodated "from eighty to one hundred pupils."[3] As in the case of its two predecessors this school was supported by State aid, contributions from philanthropic men and women, and proceeds from fairs and exhibitions.

These three schools have benefited greatly from the

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1. Allen, Edward E. "Massachusetts School and Perkins Institution for the Blind." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 620.

2. Burritt, Olin H. "Pennsylvania Institution for the Instruction of the Blind." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July1, 1932, p. 623.

3. Fourth Annual Report of the Managers of the Pennsylvania Institution for the Instruction of the Blind. March, 1837, p. 6.

long terms of excellent service of their early administrators. Dr. Howe was the Director of the Perkins Institution for more than forty years.[1] Shortly after Dr. Howe's death in 1876, Mr. Michael Anagnos, his son-in-law, succeeded him and for thirty years he carried on the work so notably initiated by Dr. Howe.[2] In 1849 William Chapin became the head of the Pennsylvania School which position he held for thirty-nine years.[3] William B. Wait was superintendent of the New York Institution from 1863 to 1905.[4]

There were several other characteristics common to these three institutions. The attendance at each of these schools included students from neighboring states as well as native students. Again each school began with a very small enrollment. Still another feature was the multiple type of support which included State and private aid.

The second stage of development in schools for the

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1. Forty-Fifth *Annual Report* of the Trustees of the Perkins Institution and Massachusetts Asylum for the Blind. Boston: Albert J. Wright State Printer, Public Document No. 27, October, 1876, p. 124.

2. Perkins Institution and Massachusetts School for the Blind, Seventy-Fifth *Annual Report* of the Trustees. Boston: Wright and Potter Printing Co., 1906, p. 287.

3. Cadwalader, John "Some Contributions by the Pennsylvania School to the Education of the Blind." American Association of Workers for the Blind. *Proceedings* of the Eleventh Convention Held at Overbrook, Philadelphia, Pennsylvania, 1911, pp. 10-13.

4. *Outlook for the Blind*, 10:105 (Autumn, 1916).

blind was marked by the State superseding private organizations in the creation and assumption of control of schools for the blind. There were a few exceptions, but the majority of the schools came under State direction. This was a distinct sign of the responsibility and recognition of the educational rights of blind minors on the part of the State. The Ohio School for the Blind founded in 1837 was the first one to attain the status of a state school.[1]

The next step was an unfortunate one. The founding of the Virginia School for the Deaf and the Blind in 1839 was the first case of a dual school, i. e., a school for both the deaf and the blind. Sixteen schools for the blind have been of this nature, but fortunately, a separation has been effected in some instances and to-day there are but nine schools of this type.[2] The vastly differentiated problems confronting these two classes of handicapped children make the combination impracticable.

In contrast to the third stage, the fourth stage was singularly progressive. With the founding of the Indiana school in 1847 a new policy was put into effect. This school took the lead in offering to all students free

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1. Best, Harry op. cit., p. 268.
2. See pages 73-76.

educational opportunities.[1] Others soon adopted the same policy. In this respect these schools for the blind were placed on a par with public schools for sighted children.

All schools for the blind established before 1900 were residential schools. Horn gives the following reason for this type of institution for handicapped children:

> Education of the blind and the deaf in the United States began at a time when city systems were in their infancy, and struggling to develop facilities for the mass of typical children. These schools were established by the States. Obviously, if they were to have pupils, they must provide residence facilities. The object of providing these facilities was not that they were an essential feature of the education of the blind and deaf; they were a simple necessity if the schools were to have pupils. Once established, the system took root. Not only did it become a characteristic of the schools and develop traditions; it grew physically in the constant extension of plants. The public became accustomed to the appropriation of funds for the education of these classes on the part of the State, and the cities, seeing these children cared for educationally, were slow to enter the field.[2]

Another reason for the rise of residential schools for the blind is the fact that many of the children who attend these schools live in various parts of the state; many come from rural and sparsely populated districts which are not able to make adequate provision for their education.

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1. Best, Harry op. cit., p. 280.

2. Horn, John L. The Education of Exceptional Children. New York: The Century Co., 1924, pp. 234-235.

The fifth stage is characterized by the establishment of day schools for the blind. Chicago in 1900 made the first provision for the education of the blind in a day school.[1] Since that time many large cities have followed suit in various parts of the United States.

Since this study does not concern itself with the problems of the day school, it will not be necessary to discuss this type of institution further except to say that it has some decided advantages in its favor which the residential school cannot claim and on the other hand certain disadvantages. It has, however, performed one great service which must be mentioned, i. e., it has stimulated many residential schools to take stock of their internal organizations with a result that successful attempts toward "de-institutionalizing" themselves have been undertaken as well as attempts to keep abreast with the times, educationally speaking. As yet there is no evidence that the day school will supplant to any great extent the State institution.

The sixth stage is thus far only in the process of development. It has been an experiment tried out by only a small number of schools. From time to time several schools for the blind have sent individual high school students to local high schools; for instance, the

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1. Horn, John L. op. cit., p. 235.

California School for the Blind,[1] the Connecticut Institute for the Blind,[2] the Kentucky School for the Blind,[3] the Maryland School for the Blind,[4] Perkins Institution and Massachusetts School for the Blind,[5] the Pennsylvania Institution for the Instruction of the Blind,[6] the Utah School for the Deaf and Blind,[7] the Virginia School for

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[1] First Biennial Report of the California School for the Blind for the Twenty-Four Months Ending June 30, 1924. Berkeley, California, Printed by the Class in Printing at the California State School for the Deaf, 1924, p. 11.

[2] Biennial Report of the Connecticut Institute for the Blind for the Fiscal Year Ending June 30, 1923 and the Fiscal Year Ending June 30, 1924. Hartford, 1925, p. 11.

[3] Report of the Kentucky School for the Blind at Louisville, Kentucky for the Year Ending June 30, 1926, p. 32.

[4] Biennial Report, Sixty-Sixth and Sixty-Seventh Annual Reports of the Board of Directors of the Maryland School for the Blind. Overlea, Maryland, 1928-30, Published by the Corporation, January, 1931, p. 5.

[5] Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, p. 20.

[6] The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Fifth Annual Report, 1927, p. 21.

[7] "Round Table." American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 566.

the Deaf and the Blind,[1] and the Western Pennsylvania School for the Blind.[2] This plan has worked satisfactorily and the students have done creditable work in the public high schools.

In 1922 the California School for the Blind inaugurated a plan whereby a selected group of high school students, mainly of third and fourth year standing, might continue their high school work at the University High School in Oakland and at the same time live at the school for the blind. In a few cases for various reasons, individual students have been sent to other local high schools. One full time teacher has had charge of the guidance and supervision of this group of students.[3]

There are many excellent features in favor of such a system. It provides broader contacts for blind boys and girls. It prepares them to meet more easily the situations which confront them when they leave school.

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1. Personal correspondence from the superintendent of the Virginia School for the Deaf and the Blind to the author dated November 3, 1932.

2. Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fifth Annual Report, 1922, p. 25.

3. First Biennial Report of the California School for the Blind for the Twenty-Four Months Ending June 30, 1924. Berkeley, California, Printed by the Class in Printing at the California State School for the Deaf, 1924, pp. 11-13.

   California School for the Blind, Third Biennial Report, June 30, 1928. Berkeley, California, Printed by the Class in Printing, California School for the Deaf, 1928, p. 9.

It gives them more varied academic opportunities. It does away with the need of schools for the blind being accredited high schools. Frequently the impositions placed on schools for the blind to merit this privilege are undesirable to the best interests of the schools. Lastly, the presence of blind students in the public schools serves often as a stimulus and incentive for better work among the sighted students.

The education of the blind in the United States has made great strides within the past one hundred years. Residential schools for the blind began as charitable institutions attended by a mere handful of children, but now they are State supported and State supervised and in 1931 their enrollments totalled more than 5000 students. Not only the States have felt the responsibility for educating their visually handicapped children, but also many of the larger municipalities have also assumed this task and have established day schools for blind children living within their precincts. Other systems have evolved which provide opportunities for wider contacts for blind students of high school standing than are afforded by the residential schools.

The progress that has been made during this century has been due in great measure to the efforts of an outstanding group of leaders who possessed those qualities

of resourcefulness, energy, idealism, intelligence, sincerity, and devotion that make for ultimate success. Mistakes have been made; controversies have arisen; and periods of marking time have occurred; but, notwithstanding, schools for the blind have forged ahead so that at the end of the first century of the education of the blind in America, they are found in many respects to be on a par with the progressive schools of the country.

2. Prominent Educators of the Blind

The field of the education of the blind has attracted a great number of noted leaders. The caliber of these men was such that they would doubtless have been successful in any worth while undertaking. They possessed tremendous energy, unflagging zeal, rare sincerity and earnestness of purpose, executive ability, and a great faith in humanity and in a Divine Power.

It has been a difficult task to choose a small number of educators of the blind from among so many men who have won prominence by their excellent work in this field. However, the basis of selection has depended upon two factors; namely, all of the seven men chosen for study have made unique and distinct contributions to the education of the blind and secondary education for the blind has particularly felt the influence of their accomplishments. Two of these men are living and are contributing invaluable

services to the education of blind children.

Samuel Gridley Howe (1801-1876)

> Dr. Howe by his manifold ability, by the all-embracing sympathy of his large soul, won, without seeking, meeds of praise from his country, as valorous soldier, as freedom's apostle, as leader in wise charity.
>
> Yet it is in still another character--that of educator of the blind--that perhaps even more honor and gratitude and love cling about his memory. The education of the blind was the work that commanded his heart and his powers for the greater part of his life.
>
> It was to the education of the blind that he devoted his heroic energy, his love of freedom, his keen insight, his plenteous wisdom.[1]

These were the introductory words of an address delivered by Miss Emilie Poulsson who represented the graduate associations of the Perkins Institution at the commemorative exercises celebrating the one hundredth anniversary of the birth of Dr. Samuel Gridley Howe in Boston, November 11, 1901. They serve eloquently to introduce this great educational leader of the blind whose noble life of service is briefly sketched below.

Dr. Howe was born in Boston in 1801. He graduated from the Boston Latin School, Brown University, and the Harvard Medical School. At the age of twenty-three he

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1. Poulsson, Emilie "The Education of the Blind." Proceedings at the Celebration of the One Hundredth Anniversary of the Birth of Dr. Samuel Gridley Howe, November 11, 1901. (Monograph). Boston: Wright and Potter Co., 1902, p. 14.

espoused the cause of the Greeks who were struggling to free themselves from the Turks.[1] For six years he served the Greek government first, as a soldier and later, as surgeon-in-chief of the fleet.[2] His sympathy was so aroused by the condition of the Greeks which he witnessed that he returned to America and raised more than $60,000 in money with which he was able to dispense aid to those suffering from the ravages of war.[3] He established hospitals and organized colonies for refugees to whom he gave employment.

On returning to America after the war, Dr. Howe was induced by Dr. John D. Fisher to organize what is known to-day as Perkins Institution and Massachusetts School for the Blind. In order to prepare himself for this new undertaking he went to Europe to inspect the work being pursued there in institutions for the blind.[4] With a small amount of apparatus and two assistant teachers Dr. Howe returned

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1. Richards, Laura E. "The Cadmus of the Blind." _Outlook for the Blind_, 20:5 (September, 1926).

2. _Ibid_., p. 5.

3. Simpson, John A. "Some lessons from the Life of Dr. Howe." _Proceedings_ at the Celebration of the One Hundredth Anniversary of the Birth of Dr. Samuel Gridley Howe, November 11, 1901. (Monograph). Boston: Wright and Potter Co., 1902, p. 82.

4. Allen, Edward E. "Massachusetts School and Perkins Institution for the Blind." American Association of Instructors of the Blind. _Proceedings_ of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 619.

to Boston and opened the school over which he presided for forty-four years.[1] His work in this school and his influence which led to the establishment of twelve schools in other states entitle him to be classed as a great educational organizer.

Dr. Howe's work among the blind was crowned by his achievements with Laura Bridgman, a young girl who was blind, deaf, and dumb. He was the first one to attempt to educate a person so afflicted and his experiments have developed into a system that has been instrumental in giving instruction to others handicapped by both blindness and deafness.[2]

Dr. Howe was deeply interested in tactual materials of instruction for the blind. He invented the Boston Line Letter, a system of embossed letters, which was used for many years in this country.[3]

The energy and genius of this great man were also directed to other fields of philanthropic endeavor, such as: his services to the feeble-minded, the insane, the prisoners, and the slaves. He worked whole-heartedly for the betterment of these people, but never did these

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1. Monroe, Paul A Cyclopedia of Education, III. New York: The Macmillan Co., 1912, p.333.

2. Poulsson, Emilie "The Education of the Blind," op. cit., p. 16.

3. French, Richard S. op. cit., p. 120.

additional interests tend to lessen his interest in the blind. He wrote unstintingly especially concerning the education of the blind and the feeble-minded during the latter part of his life until his death in 1876.

His wife, Julia Ward Howe, and their five children were a constant source of inspiration to this man who, in turn, was ardently devoted to his family.

Dr. Allen has paid Dr. Howe the following tribute:

> Dr. Howe is not only the pioneer among American educators of the blind, he is easily the greatest man that the work has ever known.

Benjamin B. Huntoon (1836-1919)

In "A Tribute of Esteem" to Benjamin B. Huntoon Susan B. Merwin said:

> No name is better known and loved among all educators and workers for the blind than that of B. B. Huntoon. His name and fame are world-wide and the influence of his scholarly mind and inventive genius on the education of the blind will never cease.[1]

He was born in Milton, Massachusetts, January 30, 1836. His father was a Unitarian minister. He graduated from Harvard University in 1856 with an A. B. degree and three years later received his A. M. degree from the same institution.

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[1] Merwin, Susan B. "A Tribute of Esteem to Mr. and Mrs. B. B. Huntoon." Outlook for the Blind, 6:94-95 (Winter Number, 1913).

For fifteen years Mr. Huntoon was a teacher in a private school for boys. In 1871 he assumed the superintendency of the Kentucky Institution for the Education of the Blind. At the same time he became the superintendent of the American Printing House for the Blind. His broad views and keen perception of educational needs made his administration of forty-one years at the Kentucky Institution a memorable one.

The present success of the American Printing House for the Blind is due to a great extent to this eminent man who initiated so many measures that have proved of great value. For example, it was through his efforts chiefly that in 1879 Congress appropriated an annual subsidy of $10,000 for the maintenance of this national printing house. To him also credit should be given for the expansion of the printing house from a two-room building to one of three stories.[1]

Mr. Huntoon made several inventions which greatly facilitated embossing books for the blind. His cylinder press was the first of its kind to be of practical use; his special devices for wetting paper before embossing and drying it were aids to book making as well as was the

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[1] Andrews, Francis M. "Benjamin Busey Huntoon of Kentucky." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, pp. 666-668.

installation of a wire sewing machine for sewing books. His dissected relief maps wereused for many years in the schools.

After a long career of nearly fifty years devoted to work among the blind, this noble man died on August 9, 1919 in Louisville, Kentucky.

William B. Wait (1839-1916)

Chronologically William B. Wait designated as the "militant champion of the educational status of our special schools" is the third in our list of educators. He was born at Amsterdam, New York, March 25, 1839. He graduated from the Albany Normal College in 1859 and immediately afterwards joined the faculty of the New York Institute for the Education of the Blind for a period of two years.[1] Subsequently he studied la and served in the capacity of city superintendent of schools until 1863 when he again entered the New York Institute, this time as principal.

During his long administration, forty-one years as active principal and eleven years as Principal Emeritus, he took a lively interest in many phases of educational work among the blind. He devised the New York Point System,

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[1] "In Memoriam." Outlook for the Blind, 10:67 (Summer Number, 1916).

which he ardently defended throughout the years of the "battle of the points."[1] He also developed a system of tangible musical notation which was put into wide use. His two inventions which for a time rivaled those of Frank H. Hall were the Kleidograph, a machine for embossing the New York Point system on paper, and the Stereograph, a machine for embossing metal plates. Other inventions consisted of a printing press that embossed books in New York Point on both sides of the page and a more satisfactory method of embossed bookbinding.[2]

Mr. Wait was one of the founders of the American Association of Instructors of the Blind; he was associated with the American Printing House for the Blind for many years; and he was one of the organizers of the Society for providing Evangelical Literature for the Blind.[3]

His death occurred on October 25, 1916. His life was one of unselfish devotion to the welfare of the blind. All of his strength and talents were directed to this cause which he so earnestly espoused.

Frank H. Hall (1841-1911)

Frank H. Hall was a versatile man who exerted a

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[1] French, Richard S. *op. cit.*, p. 158.

[2] "In Memoriam." *Outlook for the Blind*, 10:69 (Summer Number, 1916).

[3] *Ibid.*, p. 71.

great influence in the field of education in general as a lecturer, author, and teacher. In 1890 he was appointed superintendent of the Illinois Institution for the Blind, which position he successfully held until 1902.[1] He became a firm advocate of sending selected groups of blind students to the public schools. Through his strenuous efforts Chicago started the first day school for the blind in 1900. This school was used as a model by cities which later incorporated public day classes for the blind in their school systems.[2]

Mr. Hall was ever on the alert to render service to the education of the blind. His resourcefulness directed him to two inventions which have been of inestimable value. The Hall Braille-Writer, an embossing typewriter, has greatly simplified the writing of Braille by individuals. The stereotypemaker, a machine which embosses Braille characters on metal sheets, has made it possible to transcribe into Braille a wealth of written material, including the vast number of textbooks used in schools for the blind.

"F. H. Hall was a man of many traits. But the keynote to his character was his love of action toward useful ends."[3]

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1. Curtis, John B. "Frank H. Hall of Illinois." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 665.

2. Allen, Edward E. "Frank Hl. Hall." Outlook for the Blind, 4: 157-158 (Winter Number, 1911).

3. Curtis, John B. "The Inventor of the Hall-Braillewriter." Outlook for the Blind, 21:5 (June, 1927).

Edgar Elliott Bramlette (1860-1929)

Edgar E. Bramlette's life was filled to the brim with activity. With an unusually large range of experience, real organizing acumen, marked ability for solving problems, and sincere devotion to his work Mr. Bramlette entered the field of the education of the blind. Possessing such qualities one wonders not at his preeminent success.

Mr. Bramlette was born at Paris, Texas in 1860. He received his A. B. degree from Vanderbilt University in 1883, his A. M. from the University of Texas in 1886, and his Ph. D. degree from the University of Leipzig in 1891. During the years 1886 and 1889 Mr. Bramlette was United States Consul in Germany which position he held with distinction. Prior to becoming superintendent of the Texas School for the Blind, he was an instructor of ancient languages at the University of Texas, professor of languages at Texas A. & M. College, president of John Tarleton College, Superintendent of Public Schools and Principal of the High School at Fort Worth, and Superintendent of Public Schools at Texarkana.[1]

Under his thirteen years of administration the Texas School for the Blind was reorganized, a new plant was

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1. "Who's Who." *Outlook for the Blind*, 12:12 (Spring Number, 1918).

constructed and a new scholastic standard was reached. In 1923 he was called to the American Printing House for the Blind as superintendent and secretary.[1] Due to his executive ability and business management this organization was vastly strengthened and materially improved.[2] His death which occurred on March 6, 1929 was a distinct loss to the profession to which he made such enduring contributions.

Edward Ellis Allen (1861-)

Among educators of the blind the name of Edward E. Allen holds a foremost place. Never can it be said that this prophet hath no honor in his own country because his work has been enthusiastically appreciated by his contemporary countrymen who regard Dr. Allen as the dean of his profession. His fame is not limited to this country, however, as Europe is well acquainted with his work. His deep insight into educational needs and his response by way of solution of these problems have ever marked him as a leader.

He has blazed the trail for many innovations that have raised the educational status of schools for the

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1. "E. E. Bramlette Elected Superintendent of the American Printing House for the Blind." Outlook for the Blind, 17:32 (December Number, 1923).

2. Ellis, A. C. "In Memoriam Edgar Elliott Bramlette." American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 460.

blind. His influence has been felt by every one closely connected with this work.

Dr. Allen was born in West Newton, Massachusetts in 1861. He graduated from Harvard University cum laude. For three years he taught at the Royal Normal College for the Blind in London and then he returned to the United States to become principal instructor at Perkins Institution. In 1890 he became principal of the Pennsylvania Institution for the Instruction of the Blind in Philadelphia.[1] His most conspicuous achievement here was not only the construction of its new plant, a combination of the congregate and cottage types, but also the carrying out the reconstruction in it that made it a new school with a new spirit.[2]

In 1907 he was made Director of Perkins Institution.[3]

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1. Burritt, Olin H. "Edward E. Allen." Outlook for the Blind, 25:45 (June, 1931).

2. Allen, Edward E. "The Reconstruction of Perkins Institution a Pressing Need." Perkins Institution and Massachusetts School for the Blind, Seventy-Sixth Annual Report of the Trustees, 1907. Boston: Wright and Potter Printing Co., 1908, pp. 32-40.

   "Dr. Allen Says: The Significance of Overbrook." The Teachers Forum, 5:10 (September, 1932).

   "Doctor Allen Says: The Education of the Blind Involves the Education of the Seeing." The Teachers Forum. 5:29 (November, 1932).

3. Report of the Trustees, Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, p. 12.

Again he was called upon to undertake the construction of a new plant with all that this means. Characteristic of his thoroughgoing methods he visited some score of European institutions in order to devise the best possible plans. The result has been the cottage family system extended to every department of Perkins Institution. Dr. Allen has strongly advocated socializing blind children and by means of the Perkins small family type of residence he has been able to demonstrate the efficacy of this educational principle.[1]

In order to raise the professional status of teachers of the blind and lift such schools into better educational recognition, Dr. Allen was instrumental in introducing at Harvard University in the Graduate School of Education a series of courses devoted to the education of the blind.[2]

Dr. Allen for many years has been intensely interested in building up a library in his school which now contains a large collection of literature concerning blindness and a museum both of which have had no equivalent in this country.

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1. Allen, Edward E. "Massachusetts School and Perkins Institution for the Blind." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 622.

2. "Member of the Advisory Board." Outlook for the Blind, 20:10 (June, 1926).

   Hicks, Gordon "The Contributions of Each of the Pioneer Schools to the Cause of the Education of the Blind." American Association of Instructors of the Blind. Proceedings of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 649.

The first sight-saving class in the United States was due to Dr. Allen's initiative.[1] His list of achievements relative to the education of the blind is too long to enumerate in detail in this sketch. In recognition of all these outstanding contributions, including his writings and organization affiliations, the University of Pennsylvania in June, 1930 conferred upon him the honorary degree of Doctor of Science.[2]

In June, 1931 after active service for forty-six years in schools for the blind Dr. Allen's duties at Perkins Institution terminated and since that time he has become Director Emeritus.[3] Fortunately for the welfare of the blind he continues to maintain a lively interest in the cause and his strong personality and good works serve universally as an inspiration to every one in the field.

Robert B. Irwin (1883-)

Fine energy, high idealism, alertness, excellent training, a very high degree of intelligence, and an enviable personality have made the life of Robert B. Irwin an unbounded

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1. White House Conference on Child Health and Protection. Special Education: The Handicapped and the Gifted, Section III, "Education and Training." New York: The Century Co., 1931, pp. 118-119.

2. Outlook for the Blind, 25:49 (June, 1931).

3. Report of the Trustees, Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, p. 13.

success. Mr. Irwin graduated from the Washington State School for the Blind in 1901. He worked his way through the University of Washington and won a scholarship from the University Club of Seattle for three years at Harvard University where he received his degree of A. M. At Harvard, as a student of the Graduate School, he made an intensive study of the work for the blind in the United States. He availed himself of the opportunity during this time of visiting many of the schools and also organizations for blind adults.

In 1909 Mr. Irwin organized the Department for the Blind in the Cleveland public schools. In 1913 he inaugurated sight-saving classes in Cleveland. He not only continued to supervise this work in that city, but also organized classes for the blind and sight-saving classes in a number of other cities of Ohio until 1923 when he became Director of the Bureau of Research and Education of the American Foundation for the Blind.[1] Since 1929 Mr. Irwin has held the position of Executive Director of the American Foundation.[2]

The Red Cross Institute for the Blind in 1917 obtained Mr. Irwin's services in making a survey of the blind relief administration in eight states. The results of this

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1. "Robert B. Irwin." Outlook for the Blind, 17:7 (May, 1923).

2. Who's Who in American Education, III, 1931-32. New York: The Robert Cook Company, 1931, p. 293.

investigation were published in a monograph under the title "Blind Relief Laws and Their Administration."[1]

Mr. Irwin's activities and interests have been manifold, most conspicuous of which are: the publication of Clear Type books for sight-saving classes, the promotion of improved methods of printing for the blind, the completion of negotiations which have brought about a uniform Braille type for the English-speaking world, and the organization of a World Conference on Work for the Blind which was held in New York in 1931. Thus to his present position of responsibility Mr. Irwin has brought a wealth of training and experience. This training and experience, coupled with his broad vision of future possibilities, predict a momentous future for the American Foundation for the Blind.

The education of the blind has been potently influenced by the masterful personalities and the outstanding abilities of these seven educators whose achievements have been briefly sketched in the foregoing pages. They have made large contributions to the field of the education of the blind as organizers, inventors, educators, and leaders. However, with all respect to the notable and enduring services that these men have contributed, it is the spirit

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1. "Blind Relief Laws and Their Administration." A monograph prepared for the Red Cross Institute for the Blind by Robert B. and Mary B. Irwin of Cleveland, Ohio. Outlook for the Blind, 14:2-43 (Fall and Winter Number, 1920).

that they have manifested, their devotion and zeal and unselfishness and above all, their faith in the blind, that will continue to endure and to perpetuate their memory.

3. Types of Successful Alumni

The lack of sight does not necessarily, or perhaps at all, signify lack of personality, nor lack of ability, nor lack of ambition, nor lack of success. It may mean, however, a lack of opportunity to a greater or less extent. When a student graduates or otherwise leaves a school for the blind, he has to make his way in a world primarily visual. The world makes no concessions to him; he himself must make the necessary adjustments and tune in with the ways of the world. That this is possible for young blind men and women can best be shown by a few examples of successful alumni who have graduated within the last fifteen years or so from several of the residential schools. An indefinite number of individuals might be cited to prove the contention, but a sampling will suffice. The author has chosen alumni from schools of wide geographical dispersion and from schools of various sizes. These young men and women represent a wide range of accomplishments. The success of each one attests his character and capability.

The data for the biographical sketches presented below were obtained directly from the young men and women

themselves or from accounts of their achievements sent to the author by the superintendents of the schools for the blind from which they graduated with the exception of three sketches that have been summarized from articles found in the Outlook for the Blind.

Law has long been an attractive profession to the blind. There is an extensive list of notable successes in this field. Mr. Arnold Capecelatro graduated from the New York State School for the Blind in 1920. After completing the course in the Albany Law School, he was admitted to the bar, and since that time he has been practicing in his home town of Utica. He has built for himself a practice lucrative enough to comfortably support himself.

There is a common belief prevalent that blind people are by nature musical geniuses. It is true that many of these people have musical talent, but on the other hand, many of them possess no musical ability at all. Their fondness for music is often misconstrued for talent. Among the outstanding examples of alumni who have been successful in the mastery of instrumental and vocal music are such persons as the following:

Mr. Robert Monaghan has been a director of music in several schools in the State of New York. He graduated from the New York State School for the Blind in 1924. He later attended the State Normal School at Fredonia and

graduated from the music department, receiving a State normal school diploma for teaching.

Mr. Leland Logan graduated from the Colorado School for the Deaf and Blind in 1927 and the year 1929 he spent in Europe, most of the time in Milan and Paris, studying voice and opera. He participated in concerts in Europe and toured America singing in the well known operas, such as: La Boheme, Rigoletto, Lucia, Cavalleria Rusticana, Faust, Carmen, and Il Trovatore; also, he has had parts in three light operas: Robin Hood, Mikado, and Bohemian Girl.

Mr. Logan has won two scholarships, one in voice and another in violin, which have given him exceptional opportunities to pursue his musical studies. He has been endowed with a voice of rare quality and he possesses a strong personality, a keen intelligence, and a charm of manner which signify for him a future of high attainments.

A very recent graduate of the Kansas State School for the Blind has attained considerable success by his regular broadcasting programs consisting of violin, piano, pipe organ, guitar, and vocal selections. After graduating from the State institution in 1930, Mr. Earl Kennett studied at the Horner Conservatory of Music in Kansas City, Missouri. Although barely out of his teens, he has made a number of public appearances. His present success predicts a bright

future.

Another graduate of the Kansas State School for the Blind has won her way to success. Miss Elsie Snowbarger graduated from this school in 1921. She received further academic and voice training at a Nazarene college in Hutchinson, Oklahoma. Since 1928 she has toured Kansas, Oklahoma, Texas, Colorado, Nebraska, Iowa, and Missouri assisting at meetings in each of the states as an evangelistic singer. The personality and character of this young woman are revealed by her unselfish and untiring services to her family, community, and church.

Mrs. Mary Cook Cowherd, a former student of the Tennessee School for the Blind, has made a name for herself as a mezzo soprano. Mrs. Cowherd lost her sight at six years of age. After attending the Tennessee School, she studied music at the Cincinnati Conservatory and with Louis Kriedler of the Chicago Opera Company. For some time she made her home in Alabama where she sang in church choirs and at local theatres. Mr. Albee of the Keith Albee Circuit met Mrs. Cowherd and was so impressed with her ability that he induced her to join his company and so for four years she was with them traveling from coast to coast. Later the Paramount Motion Picture Studios engaged her to sing for the vitaphone, and she was particularly successful in singing the Ave Maria in the picture "Applause." Mrs.

Cowherd has a winning personality, marked ability, and unusual energy, a combination of qualities that has made her eminently successful.[1]

The California School for the Blind is justly proud of the academic success of two former students. Mr. Stanley Reid graduated from the State school in 1918. He attended the University of California where he received his A. B. degree in 1923 and his Ph. D. degree in 1930 in the department of Philosophy. His doctor's dissertation entitled "The Role of Logical Form in Propositions about Existence" has since been published by the University of California Press, an honor accorded to few. Mr. Reid is a member of Phi Beta Kappa. He has had the opportunity of extensive travel throughout the United States. Recently he has been engaged in teaching philosophy in a California junior college.

Miss Louise Wilber graduated from the California School for the Blind in 1919. She attended Stanford University where she received her A. B. degree in 1923 and her M. A. degree in 1924. While at Stanford, she was a member of Alpha Kappa Delta and the Music Club.

In 1931 Miss Wilber received her degree of Ed. D.

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1. "Working for the Vitaphone." Outlook for the Blind, 23:20 (December, 1929).

from the University of California. Her thesis entitled "Vocations of the Visually Handicapped" is a real contribution to the field. Miss Wilber was active on the University of California campus being a member of Treble Clef, Pi Phi Delta, and Pi Lambda Theta.

From 1924 until 1931 Miss Wilber taught Economics at the Anna Head School in Berkeley. She also played the piano for the chapel service each morning.

Many blind men and women have become successful in the field of osteopathy. Dr. Arthur M. Dye is a representative example of a young man who has entered this field and has been able to build up a substantial practice in spite of his physical disability. After Dr. Dye lost his sight completely at thirteen years of age, he entered the Florida School for the Deaf and Blind and graduated from that institution in 1917. A few months after graduation he entered the American School of Osteopathy in Missouri, where he made a very commendable record. Not only was his scholastic standing high, but he participated in the social life of the school and one term he achieved the distinction of being class president.

After taking the examination given by the North Carolina State Board, he received his license and began to practice immediately. Reflecting on his achievements, Dr. Dye modestly stated, "What I have done any sightless

person with average intelligence, a high-school diploma, and hard work can accomplish."[1]

Miss Betty McGuire has won recognition as a dramatic reader. After graduating from the Missouri School for the Blind, she attended Washington University where she received her A. B. degree in 1922 and her M. A. degree the following year. While in college, she actively participated in student activities, especially in athletics, and was elected a member of Phi Beta Kappa.

Miss McGuire travels about the country giving lectures and dramatic recitals for clubs, churches, schools, colleges, etc. Speaking of her repertoire she said, "I read full length plays, one act plays, short stories, poetry. I also give lecture recitals on folk lore and modern poetry."[2]

Her success has been due particularly to the artistic, literary quality of her work and to her own charm and graciousness that reflect a personality that is genial, alert, and well poised.

These young men and women have been successful in their chosen fields as one writer has said, "not because

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1. Lovewell, Reinette "Successful Sightless Osteopaths." Outlook for the Blind, 20:23-25 (June, 1926).

2. McGuire, Betty "Daring to Become a Dramatic Reader." Outlook for the Blind, 21:23-25 (March, 1928).

of their blindness, but in spite of their blindness." They all possess ability; they have made the most of their training; they have been alert to their opportunities; they have developed pleasing manners; they have put forth real, honest effort; and they have maintained unflinchingly a determined spirit to win.

4. National Auxiliary Agencies

There are a number of national auxiliary agencies whose prime efforts are devoted to work for the blind. Four of these deserve particular attention in this study. The American Foundation for the Blind, the American Printing House for the Blind, the American Association of Instructors of the Blind, and the American Association of Workers for the Blind have very close connections with the educational work for the blind in this country.

a. American Foundation for the Blind. The American Foundation for the Blind came into existence in response to an urgent need;[1] it was "an outgrowth of the work for

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1. Year-Book of the New York Institute for the Education of the Blind, Eighty-Seventh Annual Report of the Managers, 1922. New York: The Bradstreet Press, 1922, p. 34.

the men blinded in the World War."[1] It was founded and incorporated in 1921, but did not open until 1923.[2] The following summary of its activities shows the numerous and diversified services rendered by this organization. The activities are classified as: Research, Consultation Service, Field Service in State and Community, Service to Blind Individuals, Library Service, and Publication of Professional Literature.[3]

The Department of Research Activities is particularly meeting several longfelt and pressing needs. It concerns itself with problems dealing with the education of the young and adult blind, vocational opportunities for the blind, mechanical appliances used by the blind and the development of methods of publishing for the blind, statistics of the blind, and legislation affecting the blind.[4] This department in conjunction with Perkins Institution carried on an interesting project in the form of an experimental school for the development of better methods of teaching blind children.[5]

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1. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Eighty-Ninth Annual Report, 1921, p. 35.

2. Ibid., pp. 33-35.

3. "Facts about the Foundation." Leaflet published by the American Foundation for the Blind, New York, [p. 2.]

4. Ibid., [p. 2.]

5. Annual Report, American Foundation for the Blind, New York, 1928, p. 3.

The Library Service offers the facilities of a reference and lending library of more than 5000 books, pamphlets and manuscripts relating to the blind and their welfare.[1]

The American Foundation publishes two periodicals that are invaluable to workers for the blind. The Outlook for the Blind was started by Charles F. F. Campbell in April, 1907.[2] He was assisted financially in this undertaking by the Massachusetts Association for Promoting the Interests of Adult Blind, by contributions, and by subscriptions.[3] Under his capable editorship the magazine increased in circulation, worth, and prestige.

In 1923 the American Foundation took over the responsibility of publishing this periodical.[4] It appears four times a year and its large circulation shows that it has become indispensable to many workers in the field. It is their most adequate medium of exchange. It has particular merit as a source of reference concerning all matters pertaining to work among the blind. R. S. French described

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1. "Facts about the Foundation." Leaflet published by the American Foundation for the Blind, New York, [p. 2.]

2. Outlook for the Blind, 15:146 (Winter Number, 1921).

3. Outlook for the Blind, 26:8 (March, 1932).

4. "The Outlook for the Blind and its Retiring Editor." Outlook for the Blind, 17:3-4 (May, 1923).

the comprehensive character of this quarterly in these words:

> The Outlook for the Blind is in its way a most unique and at the same time most interesting and widely useful periodical. It makes the whole world of the blind its realm and in it, as nowhere else, may be found reflected all there is of progress in the work of the blind, for the blind, and by the blind. The files of this periodical adequately epitomize the progress of the years since its foundation and a perusal of its index serves to show the main currents of thought and activity from 1907 on.[1]

The following quotation denotes the cosmopolitan interest taken in this periodical.

> An analysis of the mailing list of the Outlook shows that it reaches a diversified audience. It is sent regularly to Denmark, Holland, Sweden, India, New Zealand, Australia, Tasmania, France, China, Korea, Japan, Canada, Germany, four countries of South America, England, Italy, Ireland, Palestine, Hawaiian Islands, and Porto Rico.
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> Forty-seven libraries subscribe to the Outlook. ....The Outlook goes regularly to the United States Department of Labor in Washington, to Lions Clubs, Red Cross Chapters, and boards of education ....[2]

In September, 1931 a Braille edition began and the increasing demand for embossed copies testifies to its popularity among blind men and women.[3]

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1. French, Richard S. *op. cit.*, pp. 251-252.

2. *Outlook for the Blind*, 24:5 (September, 1930).

3. *Outlook for the Blind*, 26:12 (March, 1932).

   Hayes, Charles B. "Annual Report of the Director of Field Service and Bureau of Information of the American Foundation for the Blind.". American Association of Instructors of the Blind. *Proceedings* of the Thirty-First Biennial Convention Held at New York City, New York, June 27-July 1, 1932, p. 763.

The American Foundation issues five times a year The Teachers Forum, a purely professional journal for superintendents and teachers of blind boys and girls. The articles are chiefly devoted to discussions concerning projects and methods applicable to the education of blind children. The first number of this periodical appeared in March, 1928.[1] There are two editions, one in ink-print and one in Braille.[2] The Teachers Forum affords many opportunities for stimulus and growth to instructors of blind children inasmuch as this magazine serves as a medium for the exchange of ideas among teachers employed in schools for the blind and makes possible a comparison of practices and procedures in the various schools for the blind.

The management of the American Foundation for the Blind is composed of a board of trustees who are elected annually. Support is furnished chiefly by voluntary contributions and memberships.[3] A great deal of credit is due to the members of the Board of Trustees and the Administrative Staff for the accomplishments so far

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1. Outlook for the Blind, 22:7 (June, 1928).

2. Our Annual Report, American Foundation for the Blind, New York, 1928, [p. 27]

3. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 166.

attained. The work of the President of the Board of Trustees, M. C. Migel, and of the Executive Director, Robert B. Irwin, cannot be too highly lauded.

b. American Printing House for the Blind. Every segment in the organization of the education of the blind has had a humble beginning. It has been initiated and carried to a high degree of efficiency by a few faithful, earnest workers whose vision was capable of spanning the years to come and whose intelligence comprehended the need of the enterprise attempted.

This is particularly true in the case of the American Printing House for the Blind. This organization was started in Louisville, Kentucky under the name of the Kentucky Printing House for the Blind in 1855. This name was changed to the American Printing House for the Blind in 1858 when it received its charter from the State legislature.[1] Private funds made possible this undertaking which emerged from the urgent need for a central plant to print books for the blind. Soon a number of other states, including: Tennessee, Mississippi, Arkansas, Louisiana, New Jersey, Pennsylvania, New York, Delaware, Ohio, Indiana, and Illinois, impressed by the idea joined forces with the American Printing House and rendered

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[1] Best, Harry op. cit., pp. 430-431.

financial assistance in order to extend the benefits of this concern within the radius of their respective states.[1] This situation continued until the Civil War when aid from the individual states greatly diminished. This burden, in turn, was assumed by the schools for the blind throughout the country.[2]

There was a growing feeling that the National Government should accept some responsibility for this work and through the efforts of the American Association of Instructors for the Blind Congress in 1879 acted to provide $10,000 annually for the purpose of "aiding the education of the blind in the United States through the American Printing House for the Blind."[3]

It was by means of this subsidy that the schools for the blind in this country were supplied with textbooks and apparatus. In no other country has there ever been such a grant made. With larger school enrollments the insufficiency of this grant became apparent, so in 1919 the appropriation was increased to $50,000 per annum. In 1927 the annual appropriation was raised to $75,000.

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1. Best, Harry op. cit., pp. 431-432.

2. Ibid., pp. 432-433.

3. American Printing House for the Blind, History, Purposes, Policies, Etc. Prepared by a Special Committee of the Board of Trustees for the Blind, Louisville, Kentucky, 1931, p. 3.

This money is apportioned among the schools based upon the ratio of enrollment. Since the American Printing House is a nonprofit corporation, books and apparatus are furnished at the price of the cost of production to all public institutions engaged in the education of the blind in the United States.

The data of Table I show the expenditure of the federal subsidy in 1929. This table gives the name of each institution entitled to receive a portion of this subsidy, the number of students enrolled, and the amount of the subsidy granted in 1929. The enrollment of students varies from year to year and accordingly the per capita allowance and the amount received by each institution vary also from year to year.

Table I reveals that in 1929 $75,000 was apportioned among seventy-one institutions for the blind for the purchase of embossed books. The total enrollment in these institutions for that year was 5976 students and the per capita allowance was $12,5502. For 1929 the Pennsylvania Institution for the Instruction of the Blind received the largest allowance; namely, $3,601.91. The Arizona School for the Deaf and Blind in 1929 had the smallest enrollment of all the residential schools for blind white children and received $213.35. The forty-two residential schools for the blind combined received $64,947.30.

Table I. Distribution of the $75,000 Federal Appropriation for Embossed Books to Seventy-One Institutions for the Blind in 1929.[1]

Institution	Enrollment	Amount of Quota
Alabama School for the Blind	127	$1593.88
Alabama School for the Negro Deaf and Blind	30	376.51
Arizona School for the Blind	17	213.35
Arkansas School for the Blind	130	1631.53
Atlanta School for the Blind	7	87.85
Buffalo Board of Education, Department for the Blind	5	62.75
California School for the Blind	110	1380.52
Chestnut Street School, Class for the Blind, Johnstown, Pennsylvania	22	276.10
Chicago Public Schools, Department for the Blind	65	815.76
Cincinnati Public Schools, Department for the Blind	11	138.05
Cleveland Public Schools, Department for the Blind	36	451.81
Colorado School for the Deaf and Blind	73	916.16
Connecticut School for the Blind	61	765.56
Connecticut Nursery for the Blind	4	50.21
Detroit Public Schools, Department for the Blind	30	376.51
Duluth Public Schools, Department for the Blind	3	37.65
Florida School for the Blind, Deaf and Dumb	54	677.71
Georgia Academy for the Blind	117	1468.37
Idaho School for the Deaf and Blind	26	326.31
Illinois School for the Blind	235	2949.30
Indiana School for the Blind	144	1807.23
Iowa College for the Blind	146	1832.33
Jersey City Public Schools, Department for the Blind	9	112.95
Kansas School for the Education of the Blind	126	1581.33
Kentucky School for the Blind	112	1408.62
Los Angeles Public Schools, Department for the Blind	39	489.46

Institution	Enrollment	Amount of Quota
Louisiana Institution for the Blind	76	953.82
Louisiana School for the Blind, Colored	31	389.06
Maryland School for the Blind . . .	110	1380.52
Massachusetts School and Perkins Institution for the Blind	264	3313.25
Michigan Employment Institution for the Blind	75	941.27
Michigan School for the Blind . . .	177	2221.39
Milwaukee Public Schools, Department for the Blind	12	150.60
Minnesota School for the Blind. . .	124	1556.22
Minneapolis Public Schools, Department for the Blind	27	338.86
Mississippi Institution for the Blind	75	941.27
Missouri School for the Blind . . .	109	1367.97
Montana School for the Deaf and Blind	22	276.10
Nebraska School for the Blind . . .	65	815.76
Newark Public Schools, Department for the Blind	23	288.65
New Mexico Institution for the Blind	83	1041.67
New Orleans Public Schools, Department for the Blind.	8	100.40
New York Institute for the Blind. .	131	1644.08
New York State School for the Blind	174	2183.73
New York City Public Schools, Department for the Blind.	98	1229.92
North Carolina School for the Deaf and Blind	227	2848.90
North Dakota School for the Blind .	40	502.01
Ohio State School for the Blind . .	240	3012.05
Oklahoma School for the Deaf and Blind	9	112.95
Oklahoma School for the Blind . . .	131	1644.08
Oregon Institute for the Blind . .	50	627.51
Oregon Employment Institute for the Blind	62	778.11
Pennsylvania Institution for the Blind	287	3601.91
Paterson School for the Blind . . .	14	175.70

Institution	Enroll-ment	Amount of Quota
Royer-Greaves School for the Blind	17	213.35
Seattle Public School for the Blind	3	37.65
South Carolina School for the Deaf and Blind	111	1393.07
South Dakota School for the Blind .	35	439.26
Tennessee School for the Blind. . .	231	2899.10
Texas School for the Blind.	245	3074.80
Texas Institution for the Deaf and Blind (Colored)	97	1217.37
Toledo Public Schools, Department for the Blind	7	87.85
Utah School for the Blind	33	414.15
Virginia School for the Deaf and Blind	77	966.36
Virginia School for the Colored Deaf and Blind.	26	326.30
Washington School for the Blind . .	82	1029.12
Western Pennsylvania Institution for the Blind	154	1932.73
West Virginia Schools for the Deaf and Blind	110	1380.52
West Virginia School for the Blind, Colored	20	251.00
Wisconsin School for the Blind. . .	234	2936.75
Youngstown Board of Education, Department for the Blind.	11	138.05
71 Total Per Capita....$12.5502	5976	$75,000.00

1. The data in Table I were obtained from "States Having Institutions for the Blind." Sixty-First Report of the Board of Trustees of the American Printing House for the Blind, Louisville, Kentucky. Louisville: George G. Fetter Company, 1929, p. 21.

The American Printing House for the Blind is controlled by a Board of Managers who are elected annually. The Superintendents of the Schools for the Blind in the United States are ex-officio members of the Managing Board.[1] Officials of the Treasury Department of the United States Government examine and approve the disbursement of the annual appropriation.[2]

An estimation of the unique and valuable work that is being accomplished by this organization is stated by I. S. Wampler in the following words:

> As a start, I have to say while I have your attention that the American Printing House for the Blind has rendered and is rendering a great service to the blind. To have been without its services, or that of some substitute or equivalent organization, would have greatly handicapped the blind and made much slower their educational and intellectual progress during the last half century and more.[3]

Although the main purpose of the American Printing House for the Blind is to supply textbooks and apparatus to the schools for the blind, it also has undertaken the

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 76.

2. American Printing House for the Blind, History, Purposes, Policies, Etc. Prepared by a Special Committee of the Board of Trustees for the Blind, Louisville, Kentucky, 1931, p. 9.

3. Wampler, I. S. "The American Printing House for the Blind, Its Scope and Function." American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 473.

embossing of books for libraries for the blind and other organizations which are able to pay for their requested publications.[1]

c. American Association of Instructors of the Blind.

There are two national associations whose activities directly affect the education of the blind. The importance of the innovations and policies for the improvement of the instruction of the blind for which they have been responsible can hardly be estimated.

The American Association of Instructors of the Blind met for the first time on August 16, 1853 at the New York Institution. Representatives from fourteen State schools were present. This first meeting, presided over by Dr. Howe, is important first, because never before had such a meeting been held in America and second, because at this meeting agitation was begun which resulted in the subsidy granted by Congress in 1879 for a permanent printing fund for the use of the blind.[2]

At the second convention which met in August, 1871 at the Indiana Institution for the Blind the most important question considered was the need of a uniform system of printing for the blind.[3]

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1. Van Cleve, Edward M. "American Printing House for the Blind." Outlook for the Blind, 24:58-59 (March, 1931).

2. "History of the American Association of Instructors of the Blind. Outlook for the Blind, 2:61-63 (April, 1908).

3. Ibid., p. 61.

At each subsequent meeting held biennially since 1872 on the even numbered years many vital problems pertaining to the education of the blind have been considered. For instance, among the papers presented at the convention held in 1930 were the following: "Aims of Physical Education," "Case for the Residential School," "Discipline and the Social Program in Residential Schools," "Educational Hand Training for Girls," "Methods in Music," "My Ideal of the Class Teacher," "Responsibility of the School for Vocational Guidance and Placement," "Training of Teachers," and "Use of Objective Methods" which give evidence of the nature and scope of the subjects discussed.[1] In such a manner this organization has been fulfilling its purpose "to foster and promote all movements having as their aim the improvement of the means of such education."[2]

The membership in this association includes five delegates from each residential school for the blind, three delegates from each public school system having a minimum enrollment of twenty-five blind students, one delegate from each library for the blind, and honorary members

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1. American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention, Held at Vancouver, Washington, June 23-27, 1930, p. 450.

2. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 297.

elected at the meetings of the association.[1]

The management of the American Association of Instructors of the Blind is composed of an executive committee of seven members who are elected every two years.[2]

d. American Association of Workers for the Blind. The American Association of Workers for the Blind was the first organization in the United States composed solely of blind people. Its beginning dates from 1895 at which time a small group of alumni of the Missouri School for the Blind met in St. Louis and discussed plans relative to the welfare of the blind. The following year they held a convention and organized themselves into the Missouri National College Association for the Blind. During the next year a second convention was held in St. Louis and representatives attended from Illinois, Iowa, and Indiana. Subsequently the organization widened its scope of activities and interests. It changed its name to the American Blind People's Higher Education and General Improvement Association. By 1903 new members included representatives from schools, workshops, and other organizations for the blind. At the convention held at Saginaw in 1905 the name of the association was changed to the American Association of Workers for the

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 297.

2. Ibid., p. 297.

Blind. The constitution was revised admitting sighted persons to full membership in the association.

The attendance has greatly increased since the early conventions. Thirty persons attended the Saginaw Convention;[1] at the convention in New York in 1931 there were approximately three hundred persons present.

The membership to-day comprises not only sighted and blind workers engaged in activities for the blind but also a large number of persons who are interested in the welfare of the blind.[2]

This association is interested in every phase of work for the blind and through its organized efforts the condition of the blind has been materially ameliorated and improved. One of its greatest achievements has been the valuable and effective work undertaken by its committee which was largely responsible for establishing Revised Braille as the uniform type for this country and thus terminating the "battle of the dots."[3]

In order to show how varied are the interests of this

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1. Nolan, Edward J. "A Brief History of the American Association of Workers for the Blind." American Association of Workers for the Blind. Proceedings of the Eleventh Convention Held at Overbrook, Philadelphia, Pennsylvania, 1911, p. 15.

2. Best, Harry op. cit., p. 675.

3. Allen, Edward E. "A Survey of the Work for the Blind in the United States from Its Earliest Beginning until Now." Perkins Institution Annual Report, 1926, p. 31.

organization a few of the topics that were discussed at the convention held in 1929 are presented at this point; Professional Ethics in Work for the Blind, Placing the Young Graduate in Society and Industry, The Social Handicap of Blindness, Supervised Recreation, Opportunities in the Newspaper Profession, Prevention of Blindness, and Vocations and Employments.[1]

The management of this association consists of an executive committee of five members who are elected biennially.[2] The general association meetings are held biennially on the odd numbered years at various places throughout the United States.

II. Rise and Development of Schools for the Blind

1. Establishment of Schools for the Blind

In order to obtain something like an accurate notion of the span of time over which schools for the blind have been founded and organized in the United States, an attempt was made to determine the date when each of the schools

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[1] American Association of Workers for the Blind. Proceedings of the Thirteenth Biennial Convention Held at Lake Wawasee, Indiana, June 24-28, 1929, pp. 225-233.

[2] Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, pp. 297-298.

in this study was founded and the date when each was opened. The information obtained is presented in Table II. Certain things should be said, however, concerning these dates. There appears to be no accurate record which can be relied upon as determining the date of founding and the date of opening of the forty-two residential schools for the blind. For instance, a discrepancy of a year or two occurred in several cases in the dates quoted by the following documents: Directory of Activities for the Blind in the United States and Canada, published in 1932; Directory of Activities for the Blind in the United States and Canada, published in 1926; The Blind by Harry Best, 1919; "Table," Outlook for the Blind, 2:154 (October, 1908). In consequence, it was necessary to accept the dates as given by the Directory of Activities for the Blind in the United States and Canada, published in 1932 and in the cases of omissions to use supplementary sources indicated in the footnotes at the end of Table II.

An examination of Table II reveals certain interesting facts. The Perkins Institution and Massachusetts School for the Blind was the first school for the blind to be founded in the United States, while the Arizona School for the Deaf and Blind was the most recent of these schools to be founded. Thirty-six schools were founded before the year 1900 and six schools have been founded since that date. Two schools were founded in each of the following years:

Table II. Names of the Forty-Two Residential Schools for the Blind with Their Dates of Founding and Opening

School	Date of Founding	Date of Opening
Alabama School for the Blind	1867	no data
Arizona School for the Deaf and Blind	1912	no data
Arkansas School for the Blind	1858	1859
California School for the Blind	1860	1860[1]
Colorado School for the Deaf and Blind	1883[2]	no data
Connecticut Institute for the Blind	1892	1893
Florida School for the Deaf and Blind	1885	1885
Georgia Academy for the Blind	1851	no data
Idaho School for the Deaf and Blind	1906	1906
Illinois School for the Blind	1848	1849
Indiana School for the Blind	1847[3]	1847
Iowa School for the Blind	1853	1853
Kansas State School for the Blind	1867	1869
Kentucky School for the Blind	1842	1842[1]
Louisiana State School for the Blind	1852	1852
Maryland School for the Blind	1853	1854
Perkins Institution and Massachusetts School for the Blind	1829	1832
Michigan School for the Blind	1854[3]	1865[3]
Minnesota School for the Blind	1864	1866
Mississippi School for the Blind	1847	1848[4]
Missouri School for the Blind	1851	1851
Montana School for the Deaf and Blind	1904	1904
Nebraska School for the Blind	1875	1875
New Mexico School for the Blind	1903	1906
New York Institute for the Education of the Blind	1831	1832
New York State School for the Blind	1865	1868
North Carolina State School for the Deaf and Blind	1845	1851[3]

School	Date of Founding	Date of Opening
North Dakota School for the Blind	1895	1908
Ohio State School for the Blind .	1837	1837
Oklahoma School for the Blind . .	1908	1908[1]
Oregon State School for the Blind	1872	1873
Pennsylvania Institution for the Instruction of the Blind. . . .	1832	1833
South Carolina School for the Deaf and Blind	1849	1849
South Dakota School for the Blind	1900	1900
Tennessee School for the Blind ..	1844	1844
Texas School for the Blind	1856	1856
Utah School for the Deaf and Blind	1884	1896[2]
Virginia School for the Deaf and Blind	1839	1839
Washington State School for the Blind	1886	no data
Western Pennsylvania School for the Blind	1888	1890
West Virginia Schools for the Deaf and Blind.	1870	1870[1]
Wisconsin School for the Blind. .	1849	1849
42 Total		

1. *Directory of Activities for the Blind in the United States and Canada.* New York: American Foundation for the Blind, 1926, pp. 17; 68; 220; 267.

2. Department for the blind founded.

3. Best, Harry *op. cit.*, pp. 325; 328; 332.

4. "Table." *Outlook for the Blind*, 2:154 (October, 1908).

1847, 1849, 1851, and 1853. One-half or twenty-one of the schools were founded between 1845 and 1872, a period of twenty-seven years. Nineteen of the schools were opened during the same year in which they were founded. In the other schools the difference between the date of founding and the date of opening ranged from one year to thirteen years. By 1931 forty states had founded a residential school for the blind; two states; namely, New York and Pennsylvania, had founded two residential schools for the blind; and eight states; namely, Delaware, Maine, Nevada, New Hampshire, New Jersey, Rhode Island, Vermont, and Wyoming had not as yet founded a residential school for the blind.

2. Changes in Names of Schools for the Blind

The idea that schools for the blind are "asylums," "hospitals," or "blind homes" is repudiated to-day. In 1931 in the list of the forty-two residential schools the name school appeared in the title of thirty-eight of them.[1] The other four schools were designated as: Connecticut Institute for the Blind, Georgia Academy for the Blind, New York Institute for the Education of the Blind, and Pennsylvania Institution for the Instruction of the Blind.

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[1] The Perkins Institution and Massachusetts School for the Blind is included in this group.

The following instances of changes in names show recognition and acknowledgment of the purposes of schools for the blind on the part of the several States.

"Arkansas Institute for the Education of the Blind" changed to "Arkansas School for the Blind" in 1877.[1]

"Florida Institute for the Blind and Deaf and Dumb" changed to "Florida School for the Deaf and the Blind" in 1909.[2]

"Illinois Institution for the Education of the Blind" changed to "Illinois School for the Blind" in 1905.[3]

The Iowa School for the Blind was called "Asylum for the Instruction of the Blind" when it opened in 1853. This name was changed to "Iowa Institution for the Instruction of the Blind" in 1860 and to "Iowa College for the Blind" in 1872. Now the correct title is "Iowa School for the Blind."[4]

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1. Report of the Arkansas School for the Blind, 1929-1930. Little Rock, Arkansas, Printed by the Printing Department, p. 7.

2. Florida State School for the Deaf and the Blind, St. Augustine, President's Biennial Report, 1922-24, pp. 53-57.

3. Twenty-Ninth Biennial Report of the Trustees, Superintendent and Treasurer of the Illinois School for the Blind, July, 1906. Springfield: Phillips Bros., State Printers, 1907, p. 5.

4. The Iowa School for the Blind, 1929-1930, pp. 2-4.

"Kentucky Institution for the Education of the Blind" changed to "Kentucky School for the Blind" in 1916.[1]

"Louisiana Institute for the Blind" changed to "Louisiana State School for the Blind" in 1908.[2]

"Maryland Institution for the Instruction of the Blind" changed to "Maryland School for the Blind" in 1886.[3]

"New York State Institution for the Blind" changed to "New York State School for the Blind" in 1895.[4]

"New England Asylum for the Blind" changed to "Perkins Institution and Massachusetts School for the Blind" in 1877.[5]

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1. Report of the Kentucky School for the Blind, Louisville, Kentucky, September 30, 1916, p. 19.

2. Elliott, E. C. "State School Systems: II, Legislation and Judicial Decisions Relating to Public Education," October 1, 1906 to October 1, 1908. United States Bureau of Education Bulletin, 1908, No. 7. Washington: Government Printing Office, 1909, p. 289.

3. Biennial Report, Forty-Ninth and Fiftieth Annual Reports of the Board of Directors of the Maryland School for the Blind for the Period Ending June 30, 1923, Overlea, Maryland, Published by the Corporation, March, 1924, p. 75.

4. Fifty-Ninth Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1926-1927. Albany: J. B. Lyon Co., 1928, p. 14.

5. Forty-Sixth Annual Report of the Trustees of the Perkins Institution and Massachusetts School for the Blind, Public Document No. 27, September, 1877, Boston: Rand, Avery, and Co., Printers to the Commonwealth, footnote p. 19.

"Asylum for the Blind" changed to "The Blind Institute" in 1905 and to "Texas School for the Blind" in 1915.[1]

"Western Pennsylvania Institution for the Blind" changed to "Western Pennsylvania School for the Blind" in 1923.[2]

"Wisconsin Institution for the Education of the Blind" changed to "Wisconsin School for the Blind" in 1885.[3]

The following quotation clearly describes the strong feeling adverse to the use of the word "asylum" in the title of the Perkins Institution soon after its inception.

> The present name of the Institution does not give a correct idea of its nature or objects. On the contrary, it is calculated to suggest a false one, and to mislead those who read or hear it.
>
> The word asylum therein contained designates the establishment as what it is not, and never should be suffered to become; namely, a home or retreat for the residence and permanent maintenance of blind persons who are superannuated, or too infirm in body or feeble in intellect to take care of themselves.
>
> The Institution was always intended as a

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1. Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Von Boeckmann-Jones Co., p. 53.

2. Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Thirty-Sixth Annual Report, McElvany and Co., Printers, 1923, p. 16.

3. Twenty-First Biennial Report of the Wisconsin School for the Blind for the Biennial Period Ending June 30, 1924, Janesville, Wisconsin, p. 243.

> school for sightless youth, and has been so conducted as to prevent it from degenerating into an asylum or refuge. Enlightened experience and true philanthropy alike demand that it should strictly preserve its educational character, and confine itself to its legitimate business, which is to give its pupils thorough instruction; to improve their physical condition and perfect the delicacy of their remaining senses; to develop their intellectual and moral natures; to increase their capacity for usefulness; to prepare them as well as possible for making their own way in the world, and becoming worthy and happy members of society; and, having done this, to send them away to their homes, just as our public schools and private academies do, to rely upon their own efforts and upon the encouragement and assistance received at the hands of their friends and neighbors for success in life. . . .
>
> . . . .
>
> The Institution has, moveover, been placed by law under the supervision of the board of education, instead of that of the board of state charities. This change of jurisdiction has removed it entirely from the category of eleemosynary establishments, and acknowledged it as an important link in the great chain of common schools, to the benefits of which the sightless have the same right as ordinary children.[1]

Schools for the blind are constantly striving to impress on the public at large that they are educational institutions primarily and ultimately. The work carried on in these schools is akin to that pursued in the public schools. Incidentally, some of their methods are different inasmuch as tactile material must be substituted for visual

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[1] Forty-Sixth Annual Report of the Trustees of the Perkins Institution and Massachusetts School for the Blind, Public Document No. 27, September, 1877, Boston: Rand, Avery, and Co., Printers to the Commonwealth, pp. 15-19.

material. However, these adjustments do not alter the purposes and aims of the schools and the results are the same. The changing of the official names of these institutions to include the word school has been effective in emphasizing the real status of these special institutions.

3. Basic Concepts in Schools for the Blind

Broadly speaking, the main purpose of schools for the blind is to educate blind or partially blind minors. The following five classifications for minors are found among these schools: five years to twenty-one years, six years to eighteen years, six years to twenty years, six years to twenty-one years, and seven years to twenty-one years. As far as possible, an effort is being made to give blind children the same educational advantages as are offered to sighted children. The administrators of these schools agree that visually handicapped boys and girls must be trained to become useful, self-respecting, self-supporting citizens.

R. S. French has succinctly and adequately epitomized the purposes of schools for the blind according to the present day ideal and understanding in the following words:

> Education unrelated to vocation is not true education. Education which fails to correlate with the great social and moral ends of actual life is worse than no education. Education

> broken up into unrelated fragments defeats its own ends. The greatest need in the education of the blind is the close correlation of subject with subject and of the whole with life, while considering the special fitness of each and respecting the personality of each and all. Complete living involves making a living, but even vocational training is vain unless complete living means social and objective adjustment and certain ideal values that are not of the material world. True education means for the blind, as for all of us, progressive adjustment of the realities both of the world we know and of that world of as yet unattained ideals, call it what we may.[1]

The tendency to-day is to regard the blind child as a child rather than a miniature blind adult. The potentialities of the individual child are given consideration. Attempts are being made to give him a well rounded education. In so far as this type of education is furnished, education for more complete living becomes a purpose. The idea of education as a preparation for living has for the most part been discounted, but still it clings tenaciously in a small group of schools.

To regard each child as an entity with individual potentialities is a new conception that is gradually gaining ground in the education of the blind. Coupled with this in the progressive schools the importance of guidance in its various aspects to the visually defective students is being recognized. Jones claims:

> Guidance is based upon the fact that human beings need help. To a greater or less extent

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[1] French, Richard S. op. cit., pp. 282-283.

> we all need the assistance of others. The possibility of education, as well as the necessity for it, is founded upon the essential dependence of people upon one another. Young people especially, are not capable of solving life's problems successfully without aid. Many critical situations occur in our lives, situations in which important and far-reaching decisions must be made, and it is very necessary that some adequate help be provided in order that these decisions may be made wisely.[1]

If guidance is necessary to boys and girls with all of their faculties intact, how much more essential it must be for handicapped children and particularly for those blind.

There is some evidence that schools for the blind are assuming as a part of their responsibility the general guidance of their former students who continue in higher institutions of learning. Some schools are giving attention to vocational guidance and placement which are most difficult problems for these special schools. Vocational training itself is much the simplest task. The history of the schools for the blind shows that the problems connected with vocational guidance have not been entirely neglected by the earliest leaders in the field. In some cases these men have been conspicuously successful, but in other cases they have accomplished little. To-day in this machine age the problem is exceptionally difficult to solve. The scarcity of work

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[1] Jones, Arthur J. Principles of Guidance. New York: McGraw-Hill Book Co., 1930, p. 3.

suitable for the blind is obvious. But the herculean task of educating the public to the realization that the blind can do certain types of work efficiently and independently confronts all educators of the blind.

The residential schools afford an excellent opportunity for the development of individual differences. It is incumbent upon them to continually analyze their purposes and procedures in the terms of individual development lest, as is lamentably true in some instances, tradition retard their progress and standardization impede their growth.

Varying degrees of emphasis are laid upon the intellectual, vocational, musical, physical, moral, and social training in the respective schools. From the early beginnings of schools for the blind in the United States all of these types of training were attempted, but it is needless to say that the nineteenth century training was not in accordance with the present day training which is cognizant of child growth and development.

An interesting example of the purposes of the Pennsylvania Institution for the Instruction of the Blind in 1837 is given as follows:

> The pupils continue to make the most satisfactory progress in the Literary branches, in Music and in the Handicrafts. Their health and morals have been carefully attended to; their happiness advances with their mental cultivation and useful employment; and we shall without doubt, be able to restore to their parents and society, these formerly helpless

> children with the means of self support and intellectual enjoyment throughout their lives.[1]

Schools for the blind, if they aim to keep abreast with the times, must emerge from the level of the static school and the dynamic school and seek to function as an organic institution. The following quotation from Williams and Rice is quite as applicable in this connection to schools for the blind as to public schools:

> . . . . The secondary school must be so organized and so conducted as to furnish ways and means for the discovery of these individual tendencies and capacities; it must offer stimulus and encouragement for their development, and provide opportunity for their expression through socially constructive channels. To the accomplishment of these purposes the time element, the subject-matter factor, the methods, and the administration must all conspire. Such is the place of the secondary school in the social order.

III. Types of Schools

1. Schools for the Blind

Twenty-six residential schools were established for blind children independent of other classes of handicapped children. In eight States: Arkansas, Iowa, Massachusetts,

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1. Fourth *Annual Report* of the Managers of the Pennsylvania Institution for the Instruction of the Blind, March, 1827, p. 5.

2. Williams, L. A. and Rice, G. A. *Principles of Secondary Education*. Boston: Ginn and Co., 1927, p. 31.

Maryland, Mississippi, Tennessee, Texas, and Wisconsin, schools for the blind were created prior to schools for the deaf.[1] In sixteen States schools for the blind were founded later than the schools for the deaf.

Deaf-blind pupils are educated in both schools for the deaf and schools for the blind. There are so few of this class of handicapped children that their education does not constitute a serious, administrative problem.[2]

Departments for the feeble-minded were maintained for a few years in connection with the schools for the blind and the deaf in Illinois, Minnesota, and Washington.[3] In Montana the State school is still composed of the departments for the blind, deaf, and feeble-minded.

2. Schools for the Deaf and the Blind

Sixteen States established dual schools, i. e., the combination of departments for the deaf and the blind in one school. Under such an arrangement departments for the blind have usually either been added to previously established schools for the deaf or the two departments have been created simultaneously.[4] Table III gives a list of these schools

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1. Best, Harry op. cit., p. 285.
2. Ibid., p. 300
3. Ibid., footnote, p. 302.
4. Ibid., p. 285.

for the blind which originated as dual schools, and in the cases where the schools for the blind have become independent of the schools for the deaf, the dates of separation are given.

Table III. Schools for the Blind That Originated as Dual Schools and the Dates of Separation[1]

School	Date of Separation
Alabama School for the Blind............	1887
Arizona State School for the Deaf and Blind[2]................................	
California School for the Blind..........	1921
Colorado School for the Deaf and Blind[2].	
Florida School for the Deaf and Blind[2]..	
Idaho School for the Deaf and the Blind[2]	
Louisiana State School for the Blind....	1898
Michigan School for the Blind...........	1880
Minnesota School for the Blind..........	1866
Montana School for the Deaf and Blind[2]..	
North Carolina State School for the Blind and the Deaf.....................	1893
South Carolina School for the Deaf and the Blind[2]............................	
Utah School for the Deaf and Blind[2].....	
Virginia School for the Deaf and Blind[2].	
Washington State School for the Blind...	1913
West Virginia Schools for the Deaf and the Blind[2]............................	
16 Total	

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[1] The data of Table III were obtained from Best, Harry The Blind, 1919, pp. 322-37 and from the Directory of Activities for the Blind in the United States and Canada, 1932, pp. 1; 6; 13; 26; 45; 52; 146; 201; 260; 274; 281; 286; 288.

[2] These States still retain the dual system of schools.

Table III shows that sixteen schools were originally of the dual type; nine schools are still of this type. The Alabama School for the Blind is considered independent, but the same governing board and superintendent control the policies of both the schools for the blind and the deaf. In the case of the North Carolina State School for the Blind and the Deaf the department for the white deaf students was removed from the original dual school in 1893 leaving the department for the white blind students and the department for the colored blind and deaf students.[1] Minnesota was the first State according to Table III to separate completely the two schools; California was the most recent one.

In order that the purposes of schools for the blind may be put into practice, adequate facilities and conditions must prevail. It is generally conceded to-day that the creation of the dual system has been an unwise procedure, and consequently there has been effected a separation in nearly one-half of these schools and in the other cases there has been considerable agitation against the system.[2]

There is little to be said in defense of the dual school. However, the reasons for establishing this type

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[1] Best, Harry op. cit., p. 332.

[2] Report of the Board of Trustees of the Colorado School for the Deaf and Blind, For the Year Ending June 30, 1925, Colorado Springs, Printed at the School, p. 5.

of school can be readily understood. Administratively it has been more economical to combine the two schools.[1] In many States the number of deaf children and blind children has been too small a nucleus for separate schools. Again, often those who were responsible for founding these schools did not appreciate the difference between these two kinds of handicaps.[2] In fact, to-day many people associate in their minds blindness and deafness. A little clear thinking reveals that the deaf and the blind have little in common, especially with reference to communication. Necessarily the educational methods used with each of these classes of physically defective children are at wide variance and each group requires highly specialized training suited to its peculiar needs. The psychology of these two types of handicapped children is quite different and accordingly the disciplinary problems are dissimilar and demand different treatment.

The problems concomitant with the dual system are legion. The inevitable result is that both schools suffer and it is usually admitted that there is discrimination against the department for the blind which generally has the smaller enrollment.

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1. Van Cleve, Edward H. "Some Advance Steps--Dual Schools Passing." American Association of Instructors of the Blind Proceedings of the Twenty-Sixth Biennial Convention Held at Austin, Texas, June 27-30, 1922, p. 20.

2. Allen, E. E. "A Survey of the Work for the Blind in the United States from Its Beginning until Now." Perkins Institution and Massachusetts School for the Blind, Ninety-Fifth Annual Report of the Trustees, 1926, pp. 24-25.

IV. Development of Secondary Education for the Blind

1. Senior High School

The data in Table IV were obtained by means of survey sheets sent to the superintendents of the forty-two residential schools for the blind, thirty of whom responded. The enrollment of secondary students in the Arizona School for the Deaf and the Blind has been too small to warrant the maintenance of a definite senior high school organization and the New York Institute for the Education of the Blind has adopted a system whereby the pupils gain their credits by single and individual achievement; consequently, these two schools have been omitted from this table.

Table IV reveals that from a total of twenty-eight schools Perkins Institution and Massachusetts School for the Blind was the first one to establish a senior high school department, which took place in 1878; and the Kentucky School for the Blind was the most recent one to establish a senior high school department, which took place in 1931-32.

The senior high school departments in nineteen of these schools began with the traditional form of organization, i. e., grades nine, ten, eleven, and twelve. The earliest one was established in the year 1878 and the most recent one in the year 1926. Other forms of senior high school organization which were established include in five instances

Table IV. Dates of Establishment of Senior High Schools for the Blind and Their Original Form of Organization

School	Year	Grades
Alabama School for the Blind.......	1917	8-9-10-11
Arkansas School for the Blind......	1890	9-10-11-12
California School for the Blind....	1914	9-10-11-12
Colorado School for the Deaf and Blind............................	no data	no data
Connecticut Institute for the Blind	1926	9-10-11-12
Florida School for the Deaf and Blind............................	1907	9-10-11-12
Georgia Academy for the Blind......	no data	no data
Idaho School for the Deaf and Blind	1908	10-11-12
Illinois School for the Blind......	1898	9-10-11-12
Indiana School for the Blind.......	1898	9-10-11-12
Iowa School for the Blind..........	no data	no data
Kansas State School for the Blind..	1902	9-10-11-12
Kentucky School for the Blind......	1931-32	10-11-12
Louisiana State School for the Blind............................	1922	8-9-10-11
Maryland School for the Blind......	no data	9-10-11-12
Perkins Institution and Massachusetts School for the Blind............................	1878	9-10-11-12
Michigan School for the Blind......	no data	no data
Minnesota School for the Blind.....	1900	9-10-11-12
Mississippi School for the Blind...	no data	no data
Missouri School for the Blind......	1899	9-10-11-12
Montana School for the Deaf and Blind............................	no data	no data
Nebraska School for the Blind......	no data	no data
New Mexico School for the Blind....	1917-1918	9-10-11-12
New York State School for the Blind............................	1900	9-10-11-12
North Carolina State School for the Deaf and Blind................	1922-23	8-9-10-11
North Dakota School for the Blind	1910	9
Ohio State School for the Blind....	no data	no data
Oklahoma School for the Blind......	1917	9-10-11-12
Oregon State School for the Blind..	no data	8-9-10-11
Pennsylvania Institution for the Instruction of the Blind.........	no data	no data

School	Year	Grades
South Carolina School for the Deaf and Blind........................	no data	8-9-10-11
South Dakota School for the Blind.	1906	9-10-11-12
Tennessee School for the Blind....	1903	9-10-11-12
Texas School for the Blind........	no data	no data
Utah School for the Deaf and Blind............................	no data	no data
Virginia School for the Deaf and Blind............................	no data	no data
Washington State School for the Blind............................	1920	9-10-11-12
Western Pennsylvania School for the Blind........................	1894	9-10-11-12
West Virginia Schools for the Deaf and Blind..................	1914-15	9
Wisconsin School for the Blind....	no data	9-10-11-12
40 Total		

grades eight, nine, ten, and eleven; in two instances grades ten, eleven, and twelve; and in one instance grade nine.

2. Junior High School

Table V presents the varying forms of organization developed in nine junior high schools for the blind. The Missouri School for the Blind tried out the experiment of a junior high school through one year only. The Michigan School for the Blind established a junior high school

department but no data were furnished with reference to it. The data in Table V were obtained by means of survey sheets sent to the superintendents of the forty-two residential schools for the blind. No answer was received from nine schools for the blind to the inquiry to find out whether or not they were maintaining junior high school departments in 1931.

Table V. Dates of Establishment of Junior High Schools for the Blind and Their Original Form of Organization

School	Year	Grades
Arkansas School for the Blind.....	1931	7-8-9
California School for the Blind...	1923	7-8-9
Florida School for the Deaf and Blind..............................	1921	7-8
Idaho School for the Deaf and Blind..............................	1920	7-8-9
Indiana School for the Blind......	1931	7-8-9
Kansas State School for the Blind	1916	6-7-8
Kentucky School for the Blind.....	1931-32	7-8-9
Michigan School for the Blind.....	no data	no data
South Dakota School for the Blind.	1931	7-8
Washington State School for the Blind..............................	1923	7-8-9
10 Total		

It will be noticed from Table V that ten residential schools for the blind were maintaining junior high school departments in 1931. In six of these schools the junior

high school department consisted of grades seven, eight, and nine; in two of the schools it consisted of grades seven and eight; and in one school it consisted of grades six, seven, and eight.

The first junior high school organization in a residential school for the blind, as far as could be ascertained, was started in 1916. As may be seen in Table V, this was followed by a second one in 1920, another one in 1921, two in 1923, and four in 1931. The first public junior high school was organized in 1910, and in 1930 it was estimated that over 5000 of these schools were in existence in the United States.[1]

3. Reasons for Organizing the Junior High School

The superintendents of the ten junior high schools for the blind listed in Table V were each asked to furnish two reasons for adopting the junior high school type of organization in their schools and the following reasons represent their responses in the order of their frequency.

1. To give younger children the benefits derived from departmental teaching.
2. To bring about better articulation in subject matter.
3. To meet the requirements of standardization common

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[1] Douglass, Harl R. Organization and Administration of Secondary Schools. Boston: Ginn and Co., 1932, p. 4.

among public schools.

4. To increase the interest of the students in the school and its work.
5. To provide for a better organization of extra-curricular activities.
6. To facilitate transition from the elementary to the senior high school grades.

The first and second reasons were each given by six superintendents; the third reason was given by three superintendents; the fourth and fifth reasons were each given by two superintendents; and the sixth reason was given by one superintendent.

The advantages attributed to the junior high school organizations as stated above are synonymous with those ascribed to public junior high schools.[1] There is one noticeable omission, however, to be found in this list which refers to the longer retention of pupils in school for which the public junior high schools are partially responsible. This is not a vital problem in the residential schools for the blind since the students are more apt to remain as long as they are permitted to do so at the latter institutions. This is due chiefly to the difficulties the blind encounter in finding employment after leaving school, and to some extent to the fact that many students enter schools for the blind beyond the usual ages for entering school and they want to avail themselves

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[1] Douglass, Harl R. op. cit., pp. 4-5.

of the opportunities provided by these institutions as long as possible.

V. Summary

It is evident from the material presented in the preceding pages that schools for the blind in the United States find themselves situated to-day in a most favorable position. The social order as well as National and State governments recognize and accept their responsibility to provide educational opportunities appropriate to this class of handicapped children. The work has attracted to it the devoted services of able leaders. There has come about among executives and workers an attitude of sane appraisal of the purposes which should actuate these institutions. Organizations have arisen and become stabilized which provide direction and materials as well as instruments with which to carry on the work. Graduates of these schools have demonstrated the possibilities of so directing the capacities and tendencies of the blind as to make possible a high degree of satisfactory adjustment of the sightless with the world of the seeing. All these conditions place schools for the blind in a position where they may now devote their attention more largely to the improvement of their organization, administration, curricula, and methods. It is necessary,

therefore, before launching upon such a program to take an inventory of the present status of these schools at the secondary level regarding their present status in respect to these internal affairs. What is now being done among secondary schools for the blind to improve their procedures in solving their problems of organization and administration, of courses and curricula, of instructional methods?

Chapter Three

Physiological and Psychological Aspects of Blindness

Two very interesting and important aspects of blindness, the physiological and psychological, are considered in this chapter. A fundamental knowledge of the physiological and psychological development of blind children is essential in order to proceed effectively with their education. The need for this knowledge has long been recognized, but scientific experiments have only in a few instances been conducted in an endeavor to solve the inherent problems. At the present time little is known about the physiological growth of blind children and less is known of their mental development from a scientifically interpreted viewpoint.

Altmann summarizes the situation in these words:

> Up to the present time, conclusions about the blind child have been drawn, in general, merely from observations--mostly superficial, by the way--of the blind child or even of the adult blind. These conclusions are nothing but information carried over and thus, naturally, have all the shortcomings and all the uncertainty of a mere interpretation. Generalization instead of individual research has caused a neglect of problems which in general child psychology have been under consideration for a long time--problems

that are obvious.[1]

This chapter presents in a broad manner a review of the findings concerning those physiological and psychological phases of blindness which affect the education of blind children. It introduces the outstanding individuals in the field and outlines their contributions. No attempt has been made to interpret or analyze to any extent the results of these investigations. Since it has been found that many of the studies cited are based on opinion and are limited to the introspection of a few isolated individuals, these facts do not warrant the assumption that they are representative. It is hoped by presenting here a summary of the work thus far undertaken in this almost neglected field that it will serve as an incentive for more scientific experimentation which in turn will result in more intelligent, more progressive, and sounder methods of instruction of blind children.

I. Physiological

1. Causes of Blindness

This first division is devoted to a discussion of the

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1. Altmann, Siegfried "Psychological Problems of the Pre-School Blind Child." Proceedings of the World Conference on Work for the Blind. New York: American Foundation for the Blind, 1932, p. 25.

causes of blindness among children in residential and day schools for the blind in the United States. The subject of prevention of blindness is of prime importance, but to include a description of what is being done and an outline of steps to be taken in the future in this field would extend the limits of this study disproportionately. It is sufficient to say that problems concerning the prevention of blindness are actively engaging the attention not only of men and women professionally interested, but also of an increasing number of laymen who are working for the elimination of preventable causes of blindness and for the conservation of vision. Two notable organizations must be mentioned whose present services predict a future of significant results--the International Association for the Prevention of Blindness with headquarters in Paris and the American National Society for the Prevention of Blindness located in New York.[1]

No accurate estimation representing the causes of blindness in children attending schools for the blind can be ascertained for several reasons. Many parents of blind children are either unable to determine the cause of blindness or are unwilling to reveal the cause, lest it seem to cast a

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[1] Hathaway, Winifred "Prevention of Blindness and Sight-Saving." Proceedings of the World Conference on Work for the Blind. New York: American Foundation for the Blind, 1932, pp. 296-297.

reflection upon them. Too often a general term is offered, for instance, "congenital cataract," which may be the result of any one of several specific causes, and this tends to discredit the reliability of the data.

In Table VI there are presented the causes of blindness among approximately 80 per cent of the pupils enrolled in the residential and day schools for the blind in this country for the years: 1928-1929, 1929-1930, 1930-1931. These figures were reported to the American Foundation for the Blind by the individual schools and the compilation was made by the National Society for the Prevention of Blindness. Since the number of schools reporting varies from year to year the actual numbers cannot be used to show trend, but they do indicate the different causes of blindness in school children and the relative order of frequency.

It appears from Table VI that ophthalmia neonatorum is still a prominent cause of blindness in children, but its decline is evidenced during the three years cited. A further discussion of this disease is subsequently presented. Many cases of blindness among children, especially among boys are due to accidents, many of which are preventable. Blindness due to hereditary diseases is far too prevalent for this enlightened age, but by the extension of eugenics and education their eradication will be made possible.

One of the most sanguine signs of progress in the field

Table VI. Causes of Blindness among Pupils in Schools and Classes for the Blind

Cause of Blindness	1928-1929		1929-1930		1930-1931	
	Number	Per Cent of Total	Number	Per Cent of Total	Number	Per Cent of Total
Ophthalmia Neonatorum	703	16.5	705	15.2	681	14.2
Congenital Cataract	636	15.0	719	15.5	694	14.5
Other Congenital	539	12.7	585	12.6	676	14.1
Optic Atrophy	594	14.0	654	14.1	570	11.9
Accidents	384	9.1	440	9.4	377	7.8
Chorioretinitis	113	2.7	142	3.0	144	3.0
Infantile Glaucoma	75	1.7	139	3.0	138	2.9
Interstitial Keratitis	148	3.4	124	2.7	143	3.0
Progressive Myopia	69	1.6	127	2.7	128	2.7
Retinitis Pigmentosa	56	1.3	80	1.7	89	1.8
Trachoma	57	1.3	49	1.0	67	1.4
Phlyctenular Keratitis	37	0.8	26	0.6	41	0.8
Others and not Specified	825	19.5	860	18.5	1049	21.9
Total	4236	100.0	4650	100.0	4797	100.0

of ophthalmeology is the reduction of the number of cases of ophthalmia neonatorum. This decrease has been due to wise legislation. In forty-three States and the District of Columbia, in 1930, the use of a prophylactic in the eyes of a new-born infant was required by law or regulation.[1] In the five States: Colorado, Illinois, Montana, Utah, and Vermont no prophylactic was required either by law or regulation.[2]

The American Foundation for the Blind obtained the following figures presented in Table VII in answer to questionnaires showing the steady decline of ophthalmia neonatorum as a cause of blindness in children attending schools and classes for the blind for the years: 1924-1925, 1925-1926, 1926-1927, 1927-1928, 1929-1930, and 1930-1931.

It must be taken into consideration in studying Table VII that there occurred a variation in the total number of children enrolled from year to year, a fact that has a slight influence on the comparison of the figures. Nevertheless, the decrease in blindness caused by ophthalmia neonatorum year by year is readily shown by the difference in percentages.

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1. "Summary Table Showing Certain Requirements, Regulations and Practices by State or Province." Prevention of Blindness in Newborn Babies. Issued by the National Society for the Prevention of Blindness, New York, Publication No. D63, pp. 7-8.

2. *Ibid.*, pp. 7-8; 11.

Table VII. Ophthalmia Neonatorum as a Cause of Blindness among Pupils in Residential and Day Classes for the Years: 1924-1925, 1925-1926, 1926-1927, 1927-1928, 1929-1930, and 1930-1931.

	Number of Pupils Enrolled	Number and Per Cent of Pupils Blinded by Ophthalmia Neonatorum	
Years	Total	Total	Per Cent
1924-1925	4952	946	19.1[1]
1925-1926	4993	927	18.5[2]
1926-1927	4633	845	18.2[3]
1927-1928	4796	769	16.0[4]
1929-1930	4649	705	15.1[5]
1930-1931	5525	756	13.7[6]

[1] Outlook for the Blind, 20:52-54 (June, 1926).

[2] Outlook for the Blind, 20:53-55 (March, 1927).

[3] Outlook for the Blind, 22:53-54 (June, 1928).

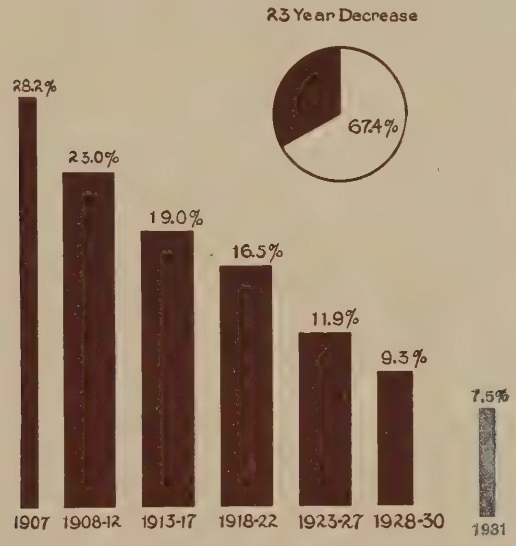
[4] Outlook for the Blind, 23:55-56 (June, 1929).

[5] Outlook for the Blind, 24:53-54 (March, 1931).

[6] Outlook for the Blind, 26:105-106 (June, 1932).

The decrease in the number of cases of blindness due to ophthalmia neonatorum in new admissions to schools for the blind in this country is also graphically presented in the following chart printed by the National Society for the Prevention of Blindness.

Scientific Medicine's Contribution to the Reduction of Ophthalmia Neonatorum



Blindness Due to Ophthalmia Neonatorum
in New Admissions to United States Schools for the Blind

National Society for the Prevention of Blindness, Inc.
450 Seventh Avenue, New York, N. Y.

The splendid work that has been accomplished in effecting a decrease in ophthalmia neonatorum suggests that attention should likewise be directed to other

preventable causes of blindness in an effort to bring about a reduction in the number of cases of blindness.

Causes of blindness frequently have a direct bearing on the physical status of the child. They often produce effects on the nervous system that are more baffling than the physiological defects themselves.

R. S. French, who has made an extensive study of the causes of blindness, has grouped the collateral results of the cause of blindness that may occur thus:

a. Seriously impair general health and vigor, as in the degenerative diseases and some acute diseases producing degenerative effects.

b. Cause a very decided dulling of hearing and even some impairing of smell and taste.

c. Affect adversely the general mentality, producing varying effects of feeble-mindedness or special mental disabilities.

d. Result in tics or in general nervousness of a pathological type.

e. Produce any combination of the above, sometimes all four together; for example, general enfeeblement, hardness of hearing, mental disability and pathological nervousness.[1]

2. Degrees of Blindness

Another very serious problem confronted in schools for the blind is the difference in degrees of blindness

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[1] French, Richard S. op. cit., p. 7.

of the students enrolled. Every school population is composed of students with varying degrees of blindness from the totally blind to those who are able to read magnified print. Should children with partial vision be submitted to the same educational treatment as totally blind children? The answer to this query has never been satisfactorily settled. Closely related to this problem is the one which involves the question whether children born blind differ sufficiently from children who have become blind at various ages to warrant a difference in the kind of instruction they should receive. Opinions on this subject have been manifold, e. g., T. H. Haines, W. B. Drummond, and S. C. Swift made a distinction between those born blind and those having seen long enough to form visual images,[1] but experiments have been few. Dr. Hayes' study is the best experimental evidence thus far.

Dr. Hayes wrote a paper entitled "A Preliminary Study of the Influence upon School Success of the Age at Which Vision is Lost" in response to a question asked by Dr. E. E. Allen whether the tests which Dr. Hayes conducted in 1919-1920 and 1920-1921 showed a difference between the achievement of the "congenital" and the "adventitious"

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1. Hayes, S. P. "Preliminary Study of the Influence upon School Success of the Age at Which Vision is Lost." American Association of Instructors of the Blind. Proceedings of the Twenty-Sixth Biennial Convention Held at Austin, Texas, June 27-30, 1922, p. 35.

blind. By means of a series of curves and scatter diagrams Dr. Hayes' study shows the attainment of nearly six hundred students from nine schools for the blind with respect to school subjects and various mental functions. The tests that were used included: Starch Graded Silent Reading Test, Courtis Geography Test, Courtis English Composition Test, Terman English Vocabulary Test, Pressey Test of Practical Information, Starch Dictionary Spelling Test, General Intelligence: Irwin-Binet Test, Pressey Rote Memory Test, Trabue Sentence Completion Test, Pressey Verbal Ingenuity Test, Pressey Word Completion Test. These students were classified into groups according to the age of becoming blind.

His conclusions as stated by him were:

> In every test the attainment of those who lost their vision in the early years measured up to the median attainment of the whole number tested, in most cases no upward trend is shown with increased years of visual experience, and in all the tests a considerable per cent of the highest scores were made by pupils of the early blind group. To be sure, we have not presented curves for all the different kinds of tests we have made, and there may be some test in which the lack of imagery will prove to be a determining handicap. We have presented, however, all the tests in which one would expect to discover the influence of a lack of imagery, and no such influence has been demonstrated. We certainly have no evidence to date that the congenitally blind have suffered in their educational and mental development because they have been taught in the same classes and by the same methods as the adventitious blind.[1]

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[1] Hayes, S. P. op. cit., pp. 35-43.

3. Age Discrepancy

Still another problem of a physiological nature that schools for the blind encounter is the wide range of ages of the student population. Frequently a child is not sent to a school for the blind until he is well beyond the usual years when children normally start school because his parents are reluctant to have him leave home or they are ignorant of the existence of this special type of institution. Many children become blind through accidents or other causes in adolescence and the period of adjustment retards their progress temporarily. In addition, such students are not generally proficient in the use of Braille so that they have to spend considerable time and energy in mastering Braille as a tool in order to participate in the work of the school. The differences in ages in the various classes means that the school work must be adapted to meet the variation in maturity of the students which obviously creates a difficult instructional situation.

Pertinent to these physiological problems an interesting experiment was carried on by Louis A. Pechstein at the New York State School for the Blind to determine what factors were influencing the success in school for 240 students in both the elementary and secondary grades. He investigated the following five factors in relation to school progress:

cause of blindness, degree of blindness, age at which blindness occurred, sex, and age at entrance to school of those who were blind from birth or early infancy. He set to work at the problem by considering the marks on a percentage basis given by the teachers and by using intelligence quotients that had been obtained by individual intelligence examinations.

His conclusions were as follows:

1. Cause of blindness. The lowest grade of work is done by congenitally blind, the highest by those blinded accidentally.

2. Degree of blindness. Ability to count fingers at various distances results in the poorest school work, probably because of the unavoidable lack of concentration, the three remaining classes doing practically the same quality of work.

3. Age at incidence. Incidence before two years results in unsatisfactory work, the possession of visual memories being of material advantage to pupils losing their sight later in life.

4. Age at entrance. Entering school before the age of seven is of no advantage so far as school success is concerned, and late entrance does not prevent good school work.

5. Sex. Sex differences are small and insignificant, the boys surpassing the girls quite uniformly.

6. Correlations. Correlations between teachers' marks, teachers' estimates and intelligence quotients are high and easily interpreted, with the exception that a fairly low correlation is secured between teachers' marks and the intelligence quotients of the girls. This fact may detract from the value of certain conclusions based on the girls' marks. In any event, it raises problems for future study.[1]

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[1] Pechstein, Louis A. "Factors Influencing the School Success of the Blind." School and Society, 19:47-52 (January 12, 1924).

The restricted number of students used in this experiment and the unreliability of teachers' marks as a basis render the conclusions of this investigation untenable. However, the experiment is suggestive of the need for more scientific research concerning these and similar factors.

4. Physical Care

The residential schools for the blind realize that the physical care and development of their students necessitate definite attention. Blind children are apt to have lowered vitalities, little resistance to disease, poor circulation, and physical languor not common, at least in the same degree, to normal sighted children.

At this point it is interesting to note the results of the maze experiments that Dr. Harvey Carr of the University of Chicago carried on with a group of normal white rats and a group of blind ones. He found that the blind rats were inferior in vigor and bodily activity to those with vision. He suggested:

> ....Vision may be advantageous because of the tonic effect of light. Visual stimuli exert a tonic and stimulative effect upon the various activities of the organism. Rats with vision exhibit the greater vigor and superabundance of bodily activity....[1]

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[1] Carr, Harvey "Maze Studies with the White Rat," II. Blind Animals. Journal of Animal Behavior, 7:290 (September-October, 1917).

These studies are interesting perhaps rather than indicative of anything vital regarding blind human beings. However, they serve as a beginning to experimental work that may in time have a real significance with regard to certain physiological problems pertinent to the blind.

The school reports indicated that in most of the schools regular medical examinations of all the students were given and systematic records were kept on file regarding weights, measurements, lung and heart tests, physical defects, diseases,etc. The schools employed physicians, nurses, ophthalmologists, and dentists whose services varied from emergency to prophylactic treatment. The past decade has seen a decided improvement in dietetic and nutritional care in these institutions. The outlines presented in the school catalogues of the work pursued in the physical education departments showed that it tended to harmonize in the general scheme toward the physical welfare of these visually handicapped children.

II. Psychological

Some valuable research work has been initiated in several parts of the country which is providing a greater insight into the problems concerning the psychology of the blind. It offers no final solutions as yet, nor can it be

said that it as yet gives direction to any considerable extent to educational procedure, but it does mark a starting point for further scientific efforts and challenges the sporadic, introspective attempts of the armchair psychologist. The psychological work under the direction of Dr. Samuel P. Hayes of Mt. Holyoke College has been outstanding and bids fair to greater accomplishment with more adequate facilities and increased support available. Other names have won recognition in this field, such as: T. H. Haines, G. M. Stratton, C. E. Seashore, Karl Bürklen, Theodor Heller, and Pierre Villey. Their contributions are discussed in the following pages in conjunction with those offerings by individuals whose work must be labelled observation and opinions.

The number of volumes dealing with the various phases of the psychology of the blind is amazing, but an evaluation of the material reveals considerable repetition and few conclusive facts.[1] The psychological aspects of blindness considered in the subsequent pages have direct bearing on the educational life of blind boys and girls. Because of their pedagogical value and the availability of material the following subjects have been chosen.

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1. "Reading Lists on Phases of the Education and Psychology of the Blind." Selected from Material in the Reference Library of the American Foundation for the Blind, 1931, Compiled by Helga Lende, Librarian. New York: American Foundation for the Blind, 1931, pp. 15;16;20;21;22-23; 26-28;34; 35-36; 37-38.

1. Sense Perception

One of the most discussed and controversial topics with regard to the psychology of the blind has been the vicariate of the senses. Some have contended that with the loss of sight the remaining senses have been sharpened. Some have vehemently maintained that the blind possess a sixth sense that guides them in their perambulations. The exponents of these beliefs have endeavored to prove their points by observations which in turn have been refuted by recently perfected scientific instruments of measurement and methods.

The first instance that we find in literature substantiating the theory that in cases where the sense of sight is lacking, the other senses are more fully used as opposed to the theory that due to the lack of sight a greater keenness of the remaining senses is found to exist is in Diderot's "Letter on the Blind"[1] published in 1849.[2]

Griesbach reported that Czermak, Gärtner, and Stern concluded that the blind were superior in the sense of touch to those with sight, but he himself found after making more than 3000 experiments that the blind were inferior to

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[1] Diderot, Denis "Lettre sur les Aveugles," Oeuvres Completes, edited by J. Assezat. Paris: Garnier Freres, 1875, Tome I, pp. 279-330.

[2] French, Richard S. op. cit., pp. 75-78.

the sighted in this respect.[1]

Dr. J. Ioteyko of Brussels claimed that the loss of sight caused in the blind a greater sensorial attention and he believed a more persistent sensorial memory was possible.[2]

C. F. Fraser made this observation:

> Our senses are not quickened by blindness, but they may be developed to a remarkable degree by careful and systematic training.[3]

Dr. Babcock spoke from his own experience when he said:

> Every one knows that most blind persons possess unusually keen and trained hearing and it is this keenness or alertness of observation through the ears that enables one without sight to detect what is going on about him or to interpret just what another person is doing. Of course some blind persons possess a keener power of observation or of interpretation through their remaining senses than have some others. It is, after all, only a matter of training.[4]

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[1] Griesbach, H. "Vergleichende Untersuchungen uber die Sinneschärfe Blinder und Sehender." Archiv fur die Gesamte Physiologie, 74:577-638; 75:365-426; 523-573 (1899).

[2] Ioteyko, J. "Les Fonctions Sensorielles des Aveugles." Revue Scientifique, 55:619-626 (1917).

[3] Fraser, C. F. "Psychology of the Blind." American Association of Instructors of the Blind. Proceedings of the Twenty-Third Biennial Convention Held at Halifax, Nova Scotia, 1916, p. 79.

[4] Babcock, R. H. "The Blind and their Sense-Perception." The Outlook, 3:871-872 (December 8, 1915).

Dr. Babcock made a further interesting explanation of orientation in the blind:

> ....Most persons appear to think that touch, or rather the sense of appreciating objects by touch, is only or mainly in the hand. There is a far finer sense of touch than that, delicate as is the hand or finger. The skin or nerves of the face residing in the skin possess in the trained a remarkable sensitiveness....The feet of the blind acquire a peculiar sensitiveness which enables the individual to recognize locality through peculiarities of the surface on which he is treading. Unevenness in the floor or differences in the thickness or feel of rugs or carpets, for instance, assist the blind in recognizing just where he is in a room. Finally, the observing person without sight may, and often does, possess or acquire an unusual sense of distance, so that he is able to judge very accurately just where he is.[1]

Seashore and Ling made an experiment to find out the difference between the sensitiveness and ability to use a sense, i. e., between innate sensory capacity and acquired skill among blind and sighted persons. They tested sixteen blind students in the high school department of the Iowa School for the Blind whose ages ranged from sixteen to twenty-six years. All of these students had been totally blind for more than five years. Simultaneously they tested fifteen Iowa City high school students with ages varying from fourteen to nineteen years. The experiment tested: localization of sound, discrimination for the intensity of

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[1] Babcock, R. H. "The Blind and their Sense-Perception." The Outlook, 3:872 (December 8, 1915).

sound, discrimination for lifted weights, discrimination for passive pressure, discrimination for active pressure, and tactual space.

Their conclusions were:

> The blind and the seeing under these circumstances are, on the whole, equally sensitive to the direction of sound, intensity of sound, lifted weights, passive pressure, active pressure, and tactual space.
> The blind who are skilful in the use of touch, muscle sense, and hearing are not more sensitive or keen in sensory discrimination than seeing persons when fundamental capacities are tested.[1]

C. M. Adams speaking of himself and his associates who are blind declared:

> The blind have no power or sense not possessed by the seeing, not even an increased keenness of the remaining senses; merely a subtraction of sight with a somewhat better utilization and development of the four other senses to meet conditions.[2]

Then Mr. Adams continued to explain his contention by saying:

> It must not be forgotten too that there are only four remaining senses, for this has some widely ramified consequences. First, it means that the blind are confronted with a constant twenty per cent deficiency in received impressions....; and secondly, it precipitates an entire new sense coordination. Normally we do not realize our senses are coordinated until possibly a cold reminds us how heavily taste depends on smell. Taking a

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1. Seashore, C. E. and Ling, T. L. "The Comparative Sensitiveness of Blind and Seeing Persons." Psychological Monograph, 25:148-158, No. 108 (1918).

2. Adams, Charles M. "The World and the Blind Man." Atlantic Monthly, 134:595 (November, 1924).

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> sense as important as sight out of circuit necessarily forces some vastly more far-reaching readjustments.[1]

With reference to hearing, he claimed that this sense again was of particular service to the blind because its potentialities have been developed, and not because it has been endowed with greater sensibility. It suffered certain limitations in comparison with sight. It was a less selective sense than sight and hence demanded a greater concentration of effort to eliminate the sounds not desired and more directed attention on what was desired at the cost of considerable fatigue. Then, too, because the auditory nerves were smaller than those of the eye, again there was an increase of fatigue.[2]

Recently two experiments have been carried on to discover the maze learning ability of the blind in comparison with the sighted. The conclusions differed somewhat in both cases, but too small a number of subjects were tested to make the experiments truly reliable. Helen Koch and Jennette Ufkess undertook their experiment to determine what influence visual guidance had in maze learning. As reagents they chose nineteen students from the Texas School for the Blind, with ages varying from fourteen to twenty-six years, and twenty

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1. Adams, Charles M. "The World and the Blind Man." Atlantic Monthly, 134:596; 599 (November, 1924).

2. Ibid., p. 597.

sighted individuals of high school or university standing, whose ages and intelligence were comparable to the blind students. These latter students were in some cases totally blind from birth, or became blind at varying ages, and in other cases they possessed shadow vision.

Their conclusions based on the maze performance of the two groups were:

1. Blind subjects tend to be less successful, on the average, in maze-learning of the stylus variety than are normal subjects. The error criterion of skill in maze performance differentiates the two visual groups more markedly than does either the trial or time criterion.
2. Some visual experience before the onset of blindness seems to reduce materially the handicap which the blind as a group appear to suffer.
3. The intelligence of the subject, whether he is with or without defective vision, determines, in part, the ease with which he masters the maze.[1]

The second experiment was carried on by Josephine Knotts and W. R. Miles. In order to determine that the blind and the sighted did not differ in sensitivity in those perceptions which are independent of vision, they used as subjects sixteen girls and twenty-four boys from the California School for the Blind whose degree of vision

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[1] Koch, Helen L. and Ufkess, Josephine "A Comparative Study of Stylus Maze Learning by Blind and Seeing Subjects." Journal of Experimental Psychology, 9:118-131 (1926).

ranged from total blindness of a congenital nature to visual acuity capable of reading print at close range. The sighted students investigated were from the Palo Alto High School. These blind and sighted students were paired according to sex, age, and I. Q. The general conclusion of this investigation was that on the whole the blind and sighted subjects were about equal in learning hand mazes.[1]

Kerr did not find in his experiment that the threshold of touch in the fingers of the blind was superior to that of intelligent children with vision. He claimed:

> It is the intellectual apperception of things felt which becomes so acute in the trained blind, not the mere discrimination of one or two points.[2]

Emil Fries with introspective knowledge reiterated the explanation offered by Adams that the blind were not endowed with keener sense perception as compensation for their deprivation of sight but that the blind used their remaining senses to greater advantage. He summed up his opinion in these words:

> The blind person does not hear better than his sighted competitor with his normal sense of hearing; he simply listens more intently and retains what he hears because of its importance

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1. Knotts, Josephine R. and Miles, W. R. "The Maze Learning Ability of Blind Compared with Sighted Children." Pedagogical Seminary and Journal of Genetic Psychology, 36:21-50 (1929).

2. Kerr, James The Fundamentals of School Health. New York: The Macmillan Co., 1927, pp. 539-540.

> to him and the constant practice to which his memory is subjected. The determining factor is to know what to listen for....It is simply a matter of development of one's potential capacities of hearing to the fullest extent, and of discriminating the significance of minor changes in stimuli.[1]

Dr. Ritchie emphatically refuted the belief in the vicariate of the senses saying:

> It must be contended, in short, that the blind have no senses which they do not share with the seeing. It is only the fuller mental content which has been developed in the blind in response to touch and hearing that leads the casual observer to such a view.[2]

Dr. French made the following pertinent statements which indicated that he felt that the blind were inferior in sense perception to the normal sighted individuals.

> The common opinion that the loss of one sense renders the others keener has now rather definitely been put to rest. Fairly conclusive experiments and the reliable testimony of blind persons all tend toward the reverse conclusion, namely, that the loss of sight is accompanied by more or less impairment of the remaining senses and not by increased sensitivity. One cannot argue a priori either way. There is actual need of a great deal more of strictly scientific psychological investigation in regard not only to distinctions of differences but also to the absolute threshold of perception, before conclusions approaching finality can be announced.[3]

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1. Fries, Emil "The Social Psychology of Blindness." Journal of Abnormal and Social Psychology, 25:14-25 No. 1 (1930).

2. Ritchie, J. M. Concerning the Blind. London: Oliver and Boyd, 1930, p. 198.

3. French, Richard S. op. cit., p. 10.

Incidental to the sense of touch there have been varying opinions with regard to which hand should be used in reading embossed print. Heller claimed that the use of both hands was superior to the use of either one, although all blind people do not employ both hands in reading Braille.[1] Of the two hands he felt that the right hand read more quickly and with greater endurance than the left one.[2]

Bürklen as a result of his investigation stated that the left index finger was the best one to use in reading.[3]

Josephine Smith in her recent experiment, the purpose of which was to determine which hand when used alone was better for reading and whether flexion or tension of the arm was more efficient, found that the left hand was decidedly superior to the right hand when used as a sense organ and that extension was slightly superior to flexion.[4]

Since the use of Braille is so important as a tool subject in schools for the blind, it is of extreme importance that a decision be reached by adequate research as to the best method of teaching Braille. Haphazard procedures are always time and energy consuming and delay effective results.

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1. Heller, Theodor Studien zur Blindenpsychologie. Leipzig: Engelmann, 1904, p. 92.

2. *Ibid*., p. 87.

3. Bürklen, Karl Blindenpsychologie. Leipzig: Barth, 1924, p. 134.

4. Smith, Josephine "Which Hand is the Eye of the Blind?" Genetic Psychology Monographs, 5:211-252 (1929).

2. Space Perception

The question emerges: Do the blind have adequate space perception? Opinions vary considerably in this respect, but on the whole, the consensus of opinion derived subjectively and from somewhat limited experimentation seems to answer the question affirmatively, with the proviso that their space conception is not equivalent to that of the sighted.

Dr. Stratton maintained in his work entitled Experimental Psychology and its Bearing upon Culture that both sight and touch were spatial senses.[1]

Dohmen in his article on space conception stated that according to his observations in the space perception between the normal person and the blind person there was a wide difference since sight had a wide range while touch was limited to a narrow field. By touch he meant perceptions due to contact with any part of the skin which he designated the outer sense of touch, and "such arising from motion of the parts of the body in the muscular strain and in the joints, inner sense of touch. The latter plays an important part in the spatial perceptions."

He believed further that after considerable development and practice hearing was capable of giving space

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[1] Stratton, G. M. Experimental Psychology and its Bearing upon Culture. New York: The Macmillan Co., 1903, p. 141.

perception.[1]

Judd maintained that the tactual perception of the blind was developed to a greater extent in them by their discriminating use of touch but it was not a better organ of sense than that possessed by normal individuals. The blind experience difficulty, however, when they come into contact with concrete objects, and it is in such cases that the limitations of their space conceptions become evident.[2]

Pillsbury alleged that space perception for the blind might be gained by means of the sense of hearing. Quoting from his book:

> For the blind, the auditory perception of space is much more important than for the seeing individual. Not only are they more accurate in all of their localisations of sound, but they use sound to obtain an idea of the distance of obstacles. The echo of the footsteps varies with the size and shape of the room, and the time between the echo and the original sound increases with the distance of a wall or other obstacle. Even when the echo is not noticed, it affects the quality of the tone. The blind have learned to connect this quality of the tone with the different distances of objects, and guide their movements accordingly. When the boys in a blind asylum were provided with felt slippers in place of their heavy-soled shoes, they could not avoid obstacles with their usual skill. The footsteps were noiseless, and they were deprived of their most important

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1. Dohmen, F. J. "The Spatial Conception of the Blind." Transactions of the Texas Academy of Science, 8:19-22 (1906).

2. Judd, C. H. Psychology. New York: C. Scribner's Sons, 1907, pp. 140-141.

> means of appreciating objects at a distance. It is said that the blind ordinarily refer their larger spaces to auditory qualities as we refer them to vision. In all respects perception of space by the ear follows the same law as perception by the eye or skin.[1]

T. H. Haines using sighted individuals and seven pupils from the Ohio State School for the Blind as subjects endeavored to determine if "the kinaesthetic sensations are a factor in all tactual space perception, even in persons with a high degree of visual memory--that it plays a less and less conspicuous part as the visual factor grows in importance, but that there is a function of the kinaesthetic sensations in this organic complex which is not to be supplanted by the visual image." He did not claim that his experiment was a thorough investigation, but in his preliminary report he was not able to present definite results. Nevertheless, this experiment serves the purpose of calling attention to further possible experiments in this field.[2]

Later Dr. Haines made a mental survey of the students of the Ohio State School for the Blind and he obtained some interesting reactions relative to space perception. Among the tests that he gave these children as well as students

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1. Pillsbury, W. B. The Essentials of Psychology. New York: The Macmillan Co., 1920, Third Edition, pp. 231-232.

2. Haines, T. H. "The Synthetic Factor in Tactual Space Perception." Psychological Review, 12:207-221 (1905).

in one of the public schools in Columbus, Ohio in order to compare the two groups was the compass direction test. With regard to the inferiority of performance that he discovered in the blind students, he said:

> In the serious difficulty many of these subjects exhibit when asked to point to the remaining points of the compass while they know they are facing in a given direction, we encounter a real difference between the mental processes of blind and seeing subjects. Without vision it is impossible to get the same conceptions of space, and such space conceptions as are developed will be matured much more slowly. This is partly because human space conceptions utilize visual imagery, and the blind must find their own tactual and inner tactual substitutes for these, in order to construct the spatial aspects of their own experiences, and come into possession of a frame-work upon which they can organize the communications of seeing subjects, and the literature they read. This construction of other than the visual imagery is in general a slower process, and results in a less adequate organization for the purposes of such larger orientation as is called for in this test. This test exhibits one of the marked handicaps under which those persons labor who are blind from birth or early childhood. No other imagery can be made to play the part of the visual in affording the large frame-work for spatial arrangement. Even in the matter of pointing, the blind rarely use the index finger alone, and very frequently the fingers are not extended. This follows naturally from the inability to appreciate fine differences in location. Could they see their own hands and arms, and could they sight a straight line, the procedure would take on a very different aspect to them. It would at once assume definiteness of conception and precision of movement, which it lacks for them as blind. Even the poor vision of those who see enough to take the regular tests for seeing persons, very few of whom can see to read, but every one of whom can see the way about, suffices to supply the synthetic space factor so that their pointing is more definite, and their conceptions of location much more

adequate.[1]

In an experiment conducted by Margaret Brown and G. M. Stratton to determine the spatial threshold of touch in blind and sighted students, thirty-five pupils from the California School for the Blind and fifteen girls from the Catholic Orphan Asylum in San Francisco were tested. The ages of the blind students ranged from twelve to eighteen years and their grades ranged from the fourth through the ninth. The girls with normal vision were between the ages of twelve and seventeen years and they were in grades from the fifth through the tenth.

The following were their most significant conclusions:

1. The spatial threshold of touch for the blind group as a whole is lower than for the group of those who have sight.
2. The degree of blindness affects the spatial threshold. The totally blind have a lower threshold than the partially blind.
3. Among the blind, the threshold does not significantly vary with grade in school. The fineness of tactual perception of space appears to be an insignificant factor in the blind child's progress in school.
4. The present findings are in accord with those of the earlier experiments in California, and of Czermak, Gartner and others, who found the blind to be superior to the seeing in the tactile discrimination of space; and are opposed to those of Uhthoff, Griesbach, Seashore and others who found either that there was no difference in this

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[1] Haines, T. H. "A Mental Survey of the Ohio State School for the Blind." Ohio Board of Administration, Publication No. 9, pp. 3-24 (January, 1916).

> respect, between the blind and the seeing, or that the tactual advantage was actually on the side of those who could see.[1]

Dr. Richie strongly feels that the blind man has not only a concept of space but that his concept is an adequate one. He claims that the blind know the three dimensions by means of the senses of touch and hearing. He even believes that the space conceived by the blind and sighted is not essentially different.[2]

Pierre Villey in his psychological study that has recently appeared in published form said:

> I am, therefore, persuaded that sight and touch speak the same language to the consciousness that listens to both of them, and that the man who sees and the blind man understand each other really, and not apparently, when they communicate their ideas to each other by means of the words of space, dimensions, distance and form. I am convinced that they use the same space for their images, with scarcely any difference other than that the space of the one who sees is always coloured, whilst that of the blind man is always apt to be laden with more or less keen tactile impressions.[3]

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1. Brown, Margaret and Stratton, G. M. "The Spatial Threshold of Touch in Blind and Seeing Children." _Journal of Experimental Psychology_, 8:434-442 (1925).

2. Ritchie, J. M. _op. cit._, p. 204.

3. Villey, Pierre _The World of the Blind_. London: Duckworth, 1930, pp. 206-207.

3. Memory

Just as the blind have been accredited with superior sense acuity, so too, their memories have been rated as superior to those with vision. Adams maintained that in the case of the blind necessity demands a full utilization and development of the memory which accounts for its seeming superiority. Normal individuals could develop their memories in like measure under similar circumstances.[1]

The study of Bond and Dearborn was undertaken to discover by means of quantitative data how much superior the blind were to normal persons in auditory memory and tactual sensibility. The authors clearly stated that the results they obtained might apply only to the blind subjects of their investigation, who consisted of a group of boys from the Perkins Institution. This group was compared with a sighted one composed of elementary, high school, and college students.

The tests given were: Reproduction Test, Retention Test, Form-Board Test, the blind surpassing in each of these three tests, and the Immediate Memory Test, in which the blind failed to show superiority.

Their comments on these results were as follows:

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1. Adams, C. M. "The World and the Blind Man." Atlantic Monthly, 134:599 (November, 1924).

> The blind as a class are trained to listen attentively and their educational system depends on the high development of the sense of touch. They have exceptional need for the development of these senses; for they must remember what is told them or be subjected to numerous inconveniences and difficulties, and they cannot read their Braille books unless their finger-tips are highly trained. For these reasons they devote years to the special training of these senses.
>
> The effect of this training appears in the excellence of memory for the passage of prose read to them. In the case of the immediate memory for isolated numbers and letters, they are likely to receive no more training than ordinary individuals, and they show no superiority. This indicates that their special abilities are limited to the things in which they are especially trained, and supports the results of other experiments in showing how narrow may be the influence of special training. It should be added, however, that the significance of this last conclusion is lessened by the fact that even direct practice in the case of the auditory memory span for numbers, letters, etc., is relatively limited in its effect.[1]

There is an urgent need for more research in respect to the memory possibilities of the blind. The blind should capitalize on any ability they may possess for memorizing but just how to develop their memories to the maximum is left for the future to disclose.

4. Dream Imagery

There have been a few sporadic investigations made to discover the nature of the dream imagery of the blind.

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[1] Bond, N. J. and Dearborn, W. F. "The Auditory Memory and Tactual Sensibility of the Blind." Journal of Educational Psychology, 8:21-26, No. 1 (1917).

R. H. Wheeler reported the visual phenomena in the dream life of T. D. Cutsforth, after sixteen years of blindness. From four recorded dreams of his subject he pointed out the unique features as follows:

> First is the appearance of association between visual and other sense modalities, which, in every instance conform to synaesthetic phenomena in the reagent's waking life....The reagent's auditory imagery is exceedingly deficient both in dream and in waking life but this deficiency is largely compensated for by visual associations or synthetic phenomena.
>
> Second, our subject has the peculiar tendency to vocalize the spoken words of another person's voice in terms of his own vocal-motor imagery, colors provide the necessary qualitative differences for identification. This is true both of waking and of dream consciousness.
>
> Thirdly, there is to be noticed a peculiar tendency, in the subject's dreams, to visualize himself at a distance....[1]

Elinor Deutsch speaking of her own experience said that in her dreams there was entirely lacking any element that reminded her of her physical deficiency, which was forced upon her at times during her waking life. She examined a group of children from the Illinois School for the Blind and also a group from the Department for the Blind of the Chicago Public Schools to discover whether their dreams like her own were auditory, kinaesthetic, and tactile in nature. She found that the children were unable

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1. Wheeler, R. H. "Visual Phenomena in the Dreams of a Blind Subject." Psychological Review, 27:315-322 (1920).

to report their dreams accurately so no conclusions could be drawn from this investigation.[1]

C. W. Kimmins asserted that kinaesthetic dreams among blind children were very much less common than among children of normal vision.[2]

He further stated that there was no evidence to prove that children born blind ever saw as dreamers, but there were numerous examples of adventitious blind who did.[3]

James Kerr speaking from hearsay said that children who became blind before the years of five to seven never dreamed of colors, while those whose blindness occurred subsequently to these years frequently saw colors in their dreams.[4]

In reporting the results of the psychometric studies carried on at the California School for the Blind, Dr. Anita Mühl said in connection with the dream life of those children:

> Dreams were classified as pleasant and unpleasant. Of pleasant dreams, thirty had simple wishfulfilling dreams and of the thirty, twenty-

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[1] Deutsch, Elinor "The Dream Imagery of the Blind." Psychoanalytic Review, 15:288-293 (1928).

[2] Kimmins, C. W. Children's Dreams. London: Longmans, Green and Co., 1920, p. 106.

[3] Ibid., p. 17.

[4] Kerr, James op. cit., p. 541.

> two dreamed that their vision was restored. There were eight having recurring dreams and of these eight, seven were motor in type. One was stirring a bowl; two playing ball; one swimming and three flying. Four had funny dreams, while, three had sensory dreams--of these, eleven were color images, two head noises.
>
> Under unpleasant dreams, sixty-eight or 64.76 per cent had terror dreams. Of these sixty-eight, twenty dreamed that something vicious was chasing them; twenty, of injury through animals and the other twenty-eight of disaster of various kinds resulting in injury. The terror dreams were all motor in type....
>
> Thirteen had distinct death dreams.[1]

The question naturally arises as to the value of an analysis of the dream life of blind children. Kimmins adequately answered this query as follows:

> It is suggested that a careful study of children's dreams may throw much light on the special interests and desires of the child at different ages, and, especially where persistent dreams are recorded of unfulfilled wishes, on those elements which are conspicuously lacking in the life of the child and which may seriously interfere with his natural development.[2]
>
> ....
>
> The dream as a good means of investigating the unconscious must play a very important role in the educational developments of the future.[3]

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1. Mühl, Anita M. "Results of Psychometric and Personality Studies of Blind Children at the California School for the Blind." American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 569.

2. Kimmins, C. W. *op. cit.*, p. 119

3. *Ibid.*, p. 121

5. Synaesthesia

Comparatively little is known to-day about synaesthesia in the blind. A few experiments have been conducted but for the most part these have been limited to individual cases and furthermore, they have not always been scientifically conducted. Raymond Wheeler and Thomas Cutsforth have carried on the most intensive investigations which have caused them to arrive at a few significant conclusions. Their most important studies are reported below.

In their study "Synaesthesia and Meaning" two subjects were investigated, T. D. Cutsforth, a synaesthetic subject who lost his sight at eleven years of age and L. C. Blades, an asynaesthetic subject who became blind at nine years of age. The first part of the study was an analysis of the process of recognizing and the second part was a study of the development of meaning. Their conclusions were as follows:

> It is significant to note that in no instance did meaning develop for any reagent until a motor attitude or visualized motor attitude attended other sensory or imaginal contents. This fact suspiciously points to the conclusion not only that kinaesthesis is an essential component of the consciousness of meaning, but also that a motor response is necessary for the development of meaning.[1]

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[1] Wheeler, R. H. and Cutsforth, T. D. "Synaesthesia and Meaning." American Journal of Psychology, 33:361-384 (1922).

These two psychologists made a study of "The Role of Synaesthesia in Learning" using again T. D. Cutsforth as the synaesthetic blind reagent and checking his introspections with a blind asynaesthetic reagent. In this study they came to these conclusions:

> Two sets of factors in the behavior of A's synaesthetic phenomena point to the view that synaesthesia is a form of conditioned reflex: (1) the parent tactual, motor or auditory-vocal-motor process acts upon the visual associate in a manner functionally resembling facilitation; (2) the colored associate is a stereotyped response to the parent process as a stimulus. The fact that the colored associate may come to function as a stimulus for the arousal of the parent process does not seem to militate against this view since the conditioned reflex as a type phenomenon need not be confined to the realm of external stimulus and explicit muscular response.[1]

A further study of Wheeler and Cutsforth entitled "Synaesthesia in Judging and Choosing" indicated:

> ....the process of choosing to be a motor response which at the outset was general in nature and which, as the act of choosing proceeded, became definitized in two directions: namely, toward each of the two alternatives. A conflict consisted of the inhibition of one of these definitized responses by the other. The choice matured when one of these latter responses became reinforced by additional stimulation such as came from subsidiary Aufgaben, memory imagery of experiences associated with the alternative in question, and by the products of judging.[2]

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1. Wheeler, R. H. and Cutsforth, T. D. "The Role of Synaesthesia in Learning." Journal of Experimental Psychology, 4:448-468 (1921).

2. Wheeler, R. H. and Cutsforth, T. D. "Synaesthesia in Judging and Choosing." Journal of General Psychology, 1:517 (1928).

[illegible] synesthesis in learning" [illegible] the [illegible]

[illegible]

> Two sets of factors in the [illegible] synesthetic phenomena [illegible] synesthesia is a form of [illegible]: (1) the parent tactual, [illegible] process acts [illegible] (2) the colored [illegible] to the parent process [illegible]. The fact that the colored [illegible] may [illegible] to function as a stimulus for the [illegible] of the parent process does not seem to [illegible] the conditioned [illegible] must be confined to the realm of [illegible].

[illegible]

[illegible]esthesis in Judging and Choosing" indicated:

> ...the process of choosing to be [illegible] response which at the outset [illegible] and which, as the set of [illegible] becomes [illegible] in two directions: [illegible] toward each of the two alternatives. [illegible] consisted of the inhibition of one of these [illegible] responses by the other. [illegible] reinforced by [illegible] from subsidiary [illegible] perceptual [illegible] and by the processes of judging.

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[1] [illegible] B. and [illegible], [illegible] D. "[illegible] in Learning." *Journal of [illegible]*, [illegible] (19[illegible]).

[2] [illegible] B. and [illegible], [illegible] D. "[illegible] in Choosing." *Journal of [illegible]* [illegible] (19[illegible]).

In the study "Synaesthesia in the Development of the Concept" Wheeler and Cutsforth found that the reagent, Mr. Cutsforth himself, depended upon synaesthetic, visual imagery and that synaesthesia was characteristic of both perceiving and conception.[1]

Cutsforth reported a study "Synaesthesia in the Process of Reasoning" in which he was again the synaesthetic subject and R. H. Wheeler the check observer. As a conclusion he stated:

> We find, in reasoning, no exception to the general rules laid down in our previous researches; that, so far as observer A is concerned, synaesthesia is a mechanism in the normal development and use of meaning; that synaesthesia is not an extraneous form of association; that it is essential to the cognitive activities of the subject who possesses it because it is the only structural tool he has of comprehending meanings; that it varies from any ordinary process of perception or conception only in the type of imagery which dominates and in the degree to which the imaginal component dominates the sensory component; and that synaesthesia is not alone a perceptual phenomenon. It has to do with the development of meaning, and is quite as conceptual as it is perceptual. It pervades the subject's entire mental life.[2]

Wheeler and Cutsforth conducted a study on "Synaesthesia, a Form of Perception" to determine:

(1) Are the secondary processes, so called, in

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1. Wheeler, R. H. and Cutsforth, T. D. "Synaesthesia in the Development of the Concept." Journal of Experimental Psychology, 8:158-159 (1925).

2. Cutsforth, T. D. "Synaesthesia in the Process of Reasoning." American Journal of Psychology, 35:97 (1924).

> the phenomenon of synaesthesia, incidental or essential in the mental life of the synaesthetic individual? (2) What is the behavior of attention between the two associated processes in any given example of synaesthesia?

Their conclusions were:

> If the results of this investigation are typical we may conclude that synaesthesis is a cognitive process, a phenomenon of meaning, and that the secondary image is essential. By means of its functioning, sensation develops to perception. Before this perception is complete there must be an attention shift from primary to secondary process or from secondary to primary. The sensory component and the image component are necessary but their order of appearance may vary.[1]

F. Starr examined a few isolated cases of synaesthetic blind subjects but these cases were not checked and hence no contribution was made. The investigator wrote his article in order to point out the possibilities of color-sound as an interesting field of study rather than to report the results of a scientific study.[2]

Another example of a blind synaesthetic reagent who has written concerning his own reactions to color audition is Clarence Hawkes. In his account he said:

> Then one is immediately, on losing sight, impressed with the fact that all the senses are interdependent and considerably mixed up. We speak of tone color, and to a great many people the phrase is meaningless; but it is a very real thing, and to myself, as well as to many other

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[1] Wheeler, R. H. and Cutsforth, T. D. "Synaesthesia, a Form of Perception." Psychological Review, 29:212-220 (1922).

[2] Starr, F. "Note on Color-Hearing." American Journal of Psychology, 5:416-418 (1892).

> people who have seen and then lost their sight, all musical or prolonged sound has color. As a general rule, the higher the pitch of the tone the higher keyed is the color, and the lower the pitch of the tone the darker the color.
>
> The middle register of the piano or organ, or of the human voice for the same pitch, is dull red, and as the pitch ascends it goes to light red, and pink, and very light yellow, up to white, until in the eighth octave there is no color at all, just as to some people there is no sound discernible in this octave. From the middle register of the human voice or the piano, the color descends to purple, deep blue, and finally black, and the very lowest notes have no perceptible color.[1]

Several investigations have been made in Germany and France in an endeavor to find an explanation for the relation of color and sound. Although a detailed review of the findings of these studies is beyond the scope of this study, mention must be made of the outstanding contributions they have made to this subject. Anschütz concluded that synaesthetic vision and ordinary vision had many identical laws. He used as his subject of analysis the blind organist Dorken.[2]

Voss has carried on experiments with a group of young men and women who lost their sight before the period of adolescence. He found that the quality of color hearing with them was the direct result of outside stimulus

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1. Hawkes, C. Hitting the Dark Trail. New York: H. Holt and Co., 1915, pp. 152-153.

2. Anschütz, G. "Untersuchen zur Analyse Musikalischer Photismen." Archiv für die Gesamte Psychologie, 51:155-218 (1925).

and had the quality of a secondary sense.[1]

Phillippe contended in his study that the blind endeavored to retain their memory for color which brought about an association of color and sound.[2]

The composite results of the investigations thus far pursued relative to colored audition in the blind are meagre and unfortunately derived from introspective data. At present no appreciable differences have been found between synaesthetic blind and visual reagents.[3] It will undoubtedly be of immediate value in the education of the blind if, in the future, the exact nature and functioning of the synaesthetic imagery of the blind can be determined.

III. Summary

Regarding this chapter as a whole, the foregoing studies group themselves into four categories in the order of their frequency; namely, those which are highly intro-

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1. Voss, W. "Das Farbenhören bei Erblindeten." _Outlook for the Blind_, 25:118-119 (September, 1931).

2. Phillippe, J. "L'Audition Coloree des Aveugles." _Revue Scientifique_, 1:806-809 (1894).

3. Wheeler, R. H. and Cutsforth, T. D. "The Synaesthesia of a Blind Subject." _Readings in Psychology_ by Raymond H. Wheeler. New York: Thomas Y. Crowell Co., 1930, p. 367.

spective, and limited to observations of isolated reagents; those that present insufficient data to warrant conclusions that are representative; those which have employed unreliable methods of collecting data; and those that by courtesy could be designated as scientific, having been experimentally conducted.

There will have been noticed considerable overlapping of physiological and psychological problems in the preceding pages. It is true that their solution demands fecund research from both points of view. The possibilities for experimental work in these fields are abundant, and the present need is imperative. The present knowledge of the physiological and mental life of blind children is decidedly meagre which condition serves as an impediment to educational aims and procedures. As this age of scientific thinking and investigation progresses, it is hoped that more attention will be directed to the improvement of the instruction of blind children through scientific research and that by this means instrospective, unreliable methods will be minimized.

Prevention of blindness is receiving emphasis in this country particularly under the able direction of the American National Society for the Prevention of Blindness. Blindness due to ophthalmia neonatorum especially during the last decade has received considerable attention.

Concerted action has been taken to prevent its disastrous results through laws, regulations, and education. The results have justified the effort expended and it is hoped that before long similar positive attention will be directed to the other causes of blindness with equal success.

There remains considerable research to be accomplished in order to decide definitely whether or not the partially and totally blind should be given the same instruction. It is suggested that such an experiment be carried on in several of the larger schools for the blind with comparable groups of students in order that a large enough number of students be used as subjects to furnish reliability to the experiment.

Further investigation is mandatory to discover whether or not there is a difference between the achievement of the congenital and adventitious blind and, in case of a difference, to find out its nature and degree.

The residential schools for the blind generally have been found to be giving serious attention to the physical status of their students. There has been evidence to show that medical care and attention are supplied and that there is an increasing tendency to take prophylactic measures to keep the students in good health and vigor.

There is urgent need for scientific research in regard

to determining the absolute threshold of perception in the blind. Since this phase of the psychology of the blind bears directly on the subject of the tactual systems of writing and reading used by the blind, its importance is readily admitted. Heller and Bürklen of Germany have made significant investigations, but their work has not been sufficiently conclusive to admit of any appreciable degree of finality. The residential schools for the blind present splendid opportunities for investigations of this nature under the most favorable conditions. There is still wanting a definite realization of the need of research in this field and particularly there must come forward trained investigators who are capable of working on the problems.

The results thus far obtained concerning space perception have had significant bearing upon educational procedure, but there is need for further experimentation along this line.

Sporadic investigations have been undertaken with relation to the memory and the dream imagery of the blind, but no final conclusions have either been reached or even approximated. Here again is a rich field for scientific experimentation.

The work of Wheeler and Cutsforth in the study of

synaesthesia has been replete with interesting results. These results indicate that here again is an opportunity for research to make a contribution to the education of the blind.

The psychology of the blind has been discussed by many writers, and as has been seen in the preceding pages of this chapter, it has been a subject of investigation by a fairly large number of men and women, ranging from interested laymen to trained scientists, but the conclusions are so meagre and so unsatisfactory as a whole that they should prove a challenge to well trained research workers whose interest in scientific results is paramount.

Chapter Four

Organization and Administration

Perhaps no phase of institutional growth and development is more revealing of the spirit that pervades that institution than an example of its organization and administration. By organization is meant the set-up or the structure of the institution; by administration is meant the functioning or the interrelation of the essential features constituting the institution. This distinction between organization and administration is made so far as this study is concerned in respect to such matters as the following: (1) Support and Control, Physical Plant, Teaching Force, Student Population, Time Distribution, and Grade and Class Distribution discussed under the general heading of Organization; and (2) Standards, Examinations, Units and Credits, Certification, Schools Accredited to the University, Auxiliary School Agencies, and Tests and Measurements treated under the heading of Administrative Aids.

I. External Organization

In treating the external organization of residential

schools for the blind, wherever it has been deemed advisable, detailed comparisons have been presented. In other cases it has seemed that a more integrated impression of the practices and procedures could be obtained by means of a more general treatment.

1. Support and Control

a. Statutory Provisions

(1) Compulsory Attendance Laws. There has been an ever increasing extension of compulsory education laws in the States, referable to blind children, and most of these laws have been made subsequent to the beginning of the twentieth century. According to Best:

> Aside from the compulsory education laws of a general nature, which may have more or less application to the blind, we have enactments specifically referring to them in more than one-half of the States, nearly all having been placed upon the statute books since 1900.[1]

The most recent law of this nature went into effect in the State of Alabama on September 1, 1932.[2]

Table VIII shows the situation in each State in 1931

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[1] Best, Harry *op. cit.*, p. 372.

[2] *Directory of Activities for the Blind in the United States and Canada.* New York: American Foundation for the Blind, 1932, p. 3.

with reference to its compulsory education laws. This table not only enumerates the States which have enacted these compulsory attendance laws but also gives the compulsory attendance ages for normal and blind children in the respective States. The data referring to the compulsory education laws were compiled in 1932.[1] The data referring to the attendance ages for both classes of children were compiled in 1928.[2]

An examination of Table VIII shows that the ten States that were deficient in compulsory education laws relative to blind children in 1931 were: Florida, Kentucky, Maine, Missouri, Nevada, New Hampshire, South Carolina, Vermont, Louisiana, and Wyoming. Every State, including the District of Columbia, had a compulsory age for normal children, while only twenty-six States had a compulsory attendance age for blind children.

The compulsory attendance age period for blind children was set in each one of nine States at the following ages:

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[1] *Directory of Activities for the Blind in the United States and Canada*. New York: American Foundation for the Blind, 1932, pp. 3; 6; 8; 15; 27; 33; 36; 40; 50; 53; 59; 65; 70; 74; 90; 98; 121; 129; 135; 147; 149; 160; 163; 190; 200; 202; 211; 224; 226; 250; 257; 262; 266; 271; 274; 281; 287; 289; 293.

[2] Keesecker, Ward W. "Laws Relating to Compulsory Education." United States Bureau of Education *Bulletin*, 1928, No. 20. Washington: Government Printing Office, 1929, pp. 13-14; 37; 44; 56; 67.

Table VIII. Extent of the State Compulsory Education Law for Blind Children and the Attendance Ages for Normal and Blind Children in 1931

State	Compulsory law	Attendance Ages	
		Normal	Blind
Alabama	x	8-16	---
Arizona	x	8-16	---
Arkansas	x	7-15	---
California	x	8-16[1]	6-16
Colorado	x	8-16	6-17
Connecticut	x	7-16	4-16
Delaware	x	7-17	7-18
District of Columbia	x	7-16	---
Florida	---	7-16	---
Georgia	x	8-14	---
Idaho	x	8-18	---
Illinois	x	7-16[2]	8-18
Indiana	x	7-16	7-18
Iowa	x	7-16	7-19
Kansas	x	7-16	7-21
Kentucky	---	7-16	---
Louisiana	---	7-14	---
Maine	---	7-17	---
Maryland	x	7-17	6-18
Massachusetts	x	7-16	---
Michigan	x	7-16	7-19
Minnesota	x	8-16	---
Mississippi	x	7-16	---
Missouri	---	7-16	7-14
Montana	x	8-16	8-16
Nebraska	x	7-16	7-20
Nevada	---	7-18	---
New Hampshire	---	8-16	---
New Jersey	x	7-16	---
New Mexico	x	6-16	5-21
New York	x	[3]	---
North Carolina	x	7-14	7-18
North Dakota	x	7-17	7-21
Ohio	x	6-18	6-18
Oklahoma	x	8-18	---
Oregon	x	9-15	8-18
Pennsylvania	x	8-16	6-16
Rhode Island	x	7-16	---

State	Compulsory Law	Attendance Ages Normal	Blind
South Carolina........	---	8-14	---
South Dakota..........	x	8-17	8-17
Tennessee.............	x	7-16	---
Texas.................	x	8-14	6-14
Utah..................	x	8-18	8-18
Vermont...............	---	8-16	8-16
Virginia..............	x	7-15	---
Washington............	x	8-16[4]	6-21
West Virginia.........	x	7-16	8-21
Wisconsin.............	x	7-16	6-18
Wyoming...............	---	7-16	---

1. Until 18 in part-time schools.

2. Until 18 where continuation schools are established.

3. 7-16 in districts with 4500 population or more and employing a superintendent; 8-16 in small districts; until 18 where continuation schools are provided.

4. 8-18 part-time school law.

4-16; 5-21; 6-14; 6-17; 6-21; 7-14; 7-20; 8-17; and 8-21. Each of the compulsory attendance age periods for blind children: 6-16; 7-19; 7-21; and 8-16 appeared in two States and each of the compulsory attendance age periods for blind children: 6-18; 7-18; and 8-18 appeared in three States. In Montana, Ohio, South Dakota, Utah, and Vermont the compulsory attendance age periods were the same for normal and blind children.

In Maryland, New Mexico, Oregon, and Wisconsin attendance was required one year earlier for blind children than for normal children; in California, Colorado, Pennsylvania, Texas, and Washington it was required two years earlier for blind children; and in Connecticut it was required three years earlier for blind children. In Illinois and West Virginia attendance was required one year earlier for normal children than for blind children.

In Connecticut, Delaware, Indiana, and Maryland the compulsory attendance law required blind children to be one year older than normal children before leaving school; in Illinois and Wisconsin it required them to be two years older; in Iowa, Michigan, and Oregon it required them to be three years older; in Nebraska, North Carolina, and North Dakota it required them to be four years older; and in Kansas, New Mexico, Washington, and West Virginia it required them to be five years older. In Nebraska the compulsory attendance law required normal children to be two years older than blind children before leaving school.

There was no compulsory attendance age period for blind children in: Alabama, Arizona, Arkansas, District of Columbia, Florida, Georgia, Idaho, Kentucky, Louisiana, Maine, Massachusetts, Minnesota, Mississippi, Nevada, New Hampshire, New Jersey, New York, Oklahoma, Rhode Island, South Carolina, Tennessee, Virginia, and Wyoming.

From the foregoing legislative provisions it would seem that blind children with few exceptions were receiving rather liberal educational opportunities so far as compulsory attendance laws were concerned. Unfortunately there were many blind children who were not attending educational institutions of any kind; a situation which authorities claimed was attributable mainly to two causes: (1) the disinclination of parents to part with their blind child, and (2) the lack of knowledge with reference to the existence of State schools for the blind.[1] In most instances whenever children attended residential schools for the blind, a temporary severance from home ties was necessitated.[1] Parents have been frequently reluctant to send their children away from their surveillance and it has often been a difficult task to convince them that these children would be better off at schools, where they would be educated under the direction of experienced people trained for this purpose, than they would be when kept at home.

In order to contact all the blind children of the State, many schools for the blind have included in their annual or biennial reports such requests as the following:

All citizens, and especially county officers,

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1. White House Conference on Child Health and Protection. Special Education: The Handicapped and the Gifted, Section III, "Education and Training." New York: The Century Co., 1931, p. 252.

are earnestly requested to notify the Superintendent of any child who should attend the School for the Blind. It is the ardent hope of the Board that every child in Arkansas, who is eligible, shall attend this institution.[1]

The School for the Blind, located at Nashville, is designed to educate the children of Tennessee of school age, both blind and partial-sighted. It is believed that there are many that ought to be in the school who are not getting any educational advantages whatever, but who are growing up in hopeless ignorance and dependence. As long as there are vacancies in the school this condition should not continue. And it is hoped that those who may know of any children that are not in the school without legitimate excuse will immediately investigate or, at least, write the Superintendent of the School to see what steps should be taken in the matter. In this connection attention is called to the compulsory attendance Act passed by the legislature of 1927.

The blind more than the seeing need educational advantages. The State provides these practically without cost. A large proportion of the blind can be trained for useful, self-supporting occupations. With them, education and proper training means everything--is their only hope.

Will not friends who know the situation, and can be of assistance, do what they can to bring educational advantages to those for whom the State makes this rather generous provision?[2]

Notwithstanding the fact that this school has been in operation most of the time since February 26, 1873, there are now many parents and friends of sightless children who know little or nothing about the advantages it offers. When in Salem, you are cordially invited to visit the school which is located quite centrally on South Church Street. It is earnestly desired that through greater publicity all parents of blind or nearly

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1. Report of the Arkansas School for the Blind, 1929-1930, p. 11.

2. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 5.

> blind children may become informed concerning the aims of this institution. If you know of a blind child who is growing up in ignorance, please consider it your duty to notify the superintendent of the Oregon State School for the Blind at Salem.[1]

The problem of how to get in touch with all the blind children in each State has been more difficult to handle than that of enforcing the compulsory school law, after the blind children have been located. School authorities have been aware that there were blind children in their States not attending school, but they have not been able to make an accurate estimation of the number of these children. Their practice has been to request the cooperation of city, county, and State officials and organizations to report every case of a blind child not attending a school or class for the blind to the superintendent of principal of the State school for the blind. A second means of solution of this problem has been to acquaint the public with the purposes and activities of the schools for the blind by various forms of publicity.

(2) Provision Made for Blind Students Out of State.

Five of the States which in 1931 had no compulsory

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[1] General Information. Oregon State School for the Blind, Salem, 1927. Salem: State Printing Department, 1927, p. 9.

education law in behalf of blind children also had no State school for the blind. These States were: Maine, New Hampshire, Nevada, Vermont, and Wyoming. The other five States which maintained State schools for the blind and up to 1931 had no compulsory education law affecting these children were: Florida, Kentucky, Louisiana, Missouri, and South Carolina.

In the case of the five States not having State schools for the blind and also Delaware, New Jersey, and Rhode Island special provision for their blind children was made out of the State. Maine, Rhode Island, and Wyoming have sent their children to the schools for the blind in neighboring States, not arbitrarily specified.[1] New Jersey has sent some of her children to schools for the blind in neighboring States and some she has admitted to local public schools.[2] Delaware has sent her children to the Pennsylvania Institution for the Instruction of the Blind at Overbrook; Nevada has sent her children to the Utah School for the Blind at Ogden and to the California School for the Blind at Berkeley; New Hampshire has sent her children to the Perkins Institution and Massachusetts School for the Blind at Watertown and to the Nazareth School for the Blind at Montreal;

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, pp. 87; 258; 295.

2. Ibid., p. 160.

and Vermont has sent her children to the Perkins Institution and Massachusetts School for the Blind at Watertown.[1]

These States had so few blind children that it was more economical to pay for their tuition at schools for the blind in other States than to maintain their own schools. In addition, these children thus received benefits and opportunities that only the larger schools could offer.

(3) Provision Made for Higher Education of the Blind. In order to meet the added expense for blind students who continue their education in higher institutions of learning, i. e., beyond the high school, which accrues from the necessity of employing paid readers, eighteen States have appropriated public funds for this purpose. New York was the first State to make an appropriation of this nature, the law having gone into effect in 1907 with an annual appropriation of $3000.[2] Dr. Newel Perry was responsible for the initiation and enactment of this law in New York and in 1913 he was able to bring about a similar enactment

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[1] Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, pp. 37; 150; 151; 276.

[2] Perry, Newel "New York's Provision for the Higher Education of the Blind." Outlook for the Blind, 2:47-48 (April, 1908).

"State Scholarships." Outlook for the Blind, 3:164 (Winter Number, 1910).

in California.[1]

The following summary obtained from the Directory of Activities for the Blind published in 1932 presents the status in 1931 of the laws in the various States which furnished money for readers to blind students attending higher institutions of learning.

> Arkansas. Quiescent because of vetoed appropriation.[2]
>
> California. Law--1915 State Law provides graduates of the State School for the Blind, who attend the University of California or any approved institution of collegiate rank, with funds to employ seeing persons to read from required textbooks, provided not more than $300 per annum per individual be expended.[3]
>
> Colorado. Law--To provide readers for eligible graduates of the Colorado School for the Deaf and Blind attending any approved institution for higher education or conservatory of music, with a sum of not more than $400 during any one school year per pupil.[4]
>
> Connecticut. The Board of Education of the Blind at its discretion may provide readers for the blind students attending institutions for higher learning. The maximum that may be spent for such purpose is $500 a year. There

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[1] "California." Outlook for the Blind, 7:124 (Autumn, 1913).

[2] Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 8.

[3] Ibid., p. 16.

[4] Ibid., p. 27.

is no law stipulating that reader services shall be provided for such students.[1]

Idaho. Readers are provided through the State Department of Vocational Training. No definite amount is appropriated.[2]

Illinois. To furnish financial assistance to eligible blind students pursuing a course of study in a university, college, conservatory of music or a normal, professional or vocational school. The amount of aid to any student shall not under ordinary circumstances exceed $300 per annum. Where the Board may consider that added assistance is necessary the amount shall be increased to $500 per annum.[3]

Indiana. Law--Whenever any blind person has matriculated in any of the departments of Indiana University, Purdue University or the Indiana State Normal School and shall make formal request therefor, it shall be the duty of the boards of trustees and the executive officers of such institutions to supply free of charge an assistant for at least three hours per day for the purpose of reading to such student under the direction of the faculty of said institution.[4]

Iowa. Law--To aid worthy blind students who are regularly enrolled in any university, college, conservatory of music, normal, professional or vocational school, approved by State Board of Education, by assisting in defraying necessary expenses including cost of a reader or assistant.[5]

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 33.

2. Ibid., p. 53.

3. Ibid., p. 60.

4. Ibid., p. 66.

5. Ibid., p. 71.

Kansas. Law--An eligible blind pupil in actual attendance at a college, university, technical or professional school, shall be provided with a reader. The Board of Administration shall expend for this purpose for the use of any one pupil an amount not to exceed $300 per annum.[1]

Minnesota. Law--To distribute aid to the amount of not more than $300 a year to ten blind students in universities, colleges and conservatories or music, for the purpose of defraying necessary expenses, including those of a reader while in attendance in said institutions.[2]

Missouri. Law--Eligible blind students admitted to higher institutions of learning, may be assisted to the extent of $300 a year to employ persons to read textbooks and pamphlets used by such students in their studies at college, university or high school. No appropriation for 1931-1932.[3]

New Jersey. To give aid to eligible blind pupils in attendance at colleges, universities, technical schools or professional schools, to an amount not exceeding $200 per year per pupil toward tuition, and of $300 per year per pupil with which to employ a person or persons to read from textbooks and pamphlets used by pupils in such institutions.[4]

New York. Law--To give aid to eligible blind pupils in attendance at colleges, universities, technical or professional schools, to the amount of $300 per year per pupil, with which to employ persons to read from textbooks and pamphlets used by pupils in such institu-

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 74.

2. Ibid., p. 130.

3. Ibid., p. 142.

4. Ibid., p. 160.

tions. The same sum is paid to pupils whose needs require that they attend institutions in other states, if said institutions conform to the requirements of this section.[1]

North Carolina. Law--To aid eligible blind pupils for five years in pursuing any course of study, profession, art, or science in any university, college, or conservatory of music approved by the North Carolina School for the Blind, to an amount not exceeding $200 per year per pupil.[2]

Ohio. Law--To provide for the further and higher education of eligible pupils of the State School for the Blind by appointing readers to read from textbooks and pamphlets used by pupils while in attendance in any college, university, technical or professional school.[3]

Oregon. Law--To aid eligible blind students attending the University of Oregon, the Oregon Agricultural College or other State institutions of higher learning, to the extent of not more than $500 per year per pupil, by providing readers and State aid.[4]

Pennsylvania. Law--To provide to an amount not exceeding $500 per year per student for the necessary expense of eligible blind students enrolled in any course of study, profession, art or science in any university, college, conservatory of music, normal, professional, or vocational school approved by the Department of Public Instruction.[5]

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[1] Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, p. 190.

[2] Ibid., p. 200.

[3] Ibid., p. 212.

[4] Ibid., p. 226.

[5] Ibid., p. 250.

> Wisconsin. Law--To provide eligible blind students attending any university, college, or conservatory of music, aid not exceeding $300 in any one year per pupil, nor exceeding in total amount $2,000, for defraying necessary expenses including a reader.[1]

An analysis of these laws reveals a striking similarity in each of the eighteen cases, which tends to prove that the New York law served to a great extent as a model for the subsequent laws in other States. A few variations occur, however. Examination of the laws just quoted shows that the amounts available to blind students for readers varied from $200 to $500 per student per year with the median amount $300; four States: Idaho, Indiana, Iowa, and Ohio, did not state a definite amount to which students attending higher institutions of learning in these States were entitled.

It is difficult to say how many students have been availing themselves of the opportunity of these scholarships since no complete estimation has been obtained. However, there is some evidence that a sufficient number have been making use of these grants to warrant the States to feel that by this aid they have been making higher education possible to worthy students who otherwise would have been deprived of this privilege.

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1. Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 294.

b. Sources of Revenue

There were four sources of revenue that were common to the residential schools for the blind as a whole, but only one of these sources was common to every individual residential school for the blind where secondary education was pursued. Although several of the schools started under private auspices, gradually the States came to realize their responsibility for the education of blind children and made appropriations for this purpose. Most of the schools by the year 1931 were public institutions owned and supported by the States. Five of the schools; namely, the Connecticut School for the Blind, the Maryland School for the Blind, the New York Institute for the Education of the Blind, the Pennsylvania Institution for the Instruction of the Blind, and the Perkins Institution and Massachusetts School for the Blind, were operated by private corporation boards and as State appropriations were made to these schools, the respective States assumed the right of authority and supervision of a general nature over them. Endowment funds, tuition, and private contributions supplemented by the State appropriations have supported these schools.

The sources from which these schools derived their support are best described by the following statements from their published reports:

> Referring to the Connecticut School for the

Blind: The institution is a private corporation, receiving state money in the form of tuition (at the present rate of $450 per year) for each Connecticut child attending it. In addition to the state funds the school benefits from personal donations and a small income from endowment funds.[1]

Referring to the Maryland School for the Blind: It has been supported by donations from individuals, the City of Baltimore and by annual appropriations from the state of Maryland.[2]

All blind persons of sound body and mind of school age, actual residents of Maryland, the District of Columbia and Delaware, may be admitted free....

For all State and Government pupils whose parents are unable to pay for tuition, board and washings, medicine and medical attendance; books and all other necessary appliances for their proper education are furnished free of charge. Inasmuch as the State does not fully meet the necessary requirements, it is felt by the management that all should pay something, even if but a small amount, to help make up the annual deficit.[3]

Referring to the New York Institute for the Education of the Blind: As in Europe, the project was at first realized and promoted by philanthropic individuals and societies. But it was soon seen to be fraught with the same ideals as all public education, and was gradually taken over by civil authorities,

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[1] Biennial Report of the Connecticut Institute for the Blind, For the Fiscal Year Ending June 30, 1925 and the Fiscal Year Ending June 30, 1926, Hartford, 1927, p. 20.

[2] Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 4.

[3] Ibid., pp. 54-55.

> until now for many years most of our schools for the blind are at least subsidized and under partial control by the state. As a matter of fact, the New York Institute for the Education of the Blind is one of the very few that are maintained to some extent by endowment and preserve their independence through a private board of trustees.[1]
>
> Referring to the Pennsylvania Institution for the Instruction of the Blind: It is not a state institution, though it receives pupils whose expenses are largely met by the State of Pennsylvania. At present, the state and the school districts meet approximately two-thirds of the per capita cost, the remaining one-third being supplied by the income from private funds, by contributions, and by supplemental payments from parents.[2]
>
> Referring to the Perkins Institution and Massachusetts School for the Blind: Though our total current expense account for each pupil is about $800 a year, nearly a half of this goes into "instruction." Where Perkins Institution differs from most other boarding schools is that, except in a few instances, neither the pupils nor their parents pay tuition. The states which send them to us pay this. But we charge only $400 a pupil, our endowment enabling us to do so without embarrassment.[3]

In addition to the five schools just mentioned deriving partial support from public funds there were in 1931 thirty-

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[1] Year-Book of the New York Institute for the Education of the Blind, Ninetieth Annual Report of the Board of Managers, 1925. New York: The Bradstreet Press, 1925, pp. 45-46.

[2] The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Eighth Annual Report, 1930, p. 93.

[3] Perkins Institution and Massachusetts School for the Blind, Ninety-Fifth Annual Report of the Trustees, 1926, p. 12.

seven State schools.[1] Their auxiliary funds were furnished by occasional donations or contributions of varying amounts. The annual appropriations to the schools were frequently insufficient, but the fact that the States assumed the responsibility of public support indicated that the rights of blind children were recognized and provided for, in most cases substantially.

The annual per capita allowance varied from State to State and no figures denoting the annual per capita allowance and the total annual appropriation have been included in this study since no fair comparison could be made due to such circumstances as a difference in economies in State administration, difference in the purchasing power of the dollar in the various sections of the country, and the lack of a clear statement of the amount apportioned to schools for the blind in the case of the dual schools.

Although the per capita allowance is not necessarily a criterion of the work pursued in the schools, it must be remembered that adequate finances offer greater opportunities for providing better teaching facilities.

It was found that the cost of educating blind children was greatly in excess of that necessary for public school

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[1] The Maryland School for the Blind and the Connecticut Institute for the Blind are sometimes regarded as State schools, but they have not been so regarded in the above classification.

children. A comparison of costs between residential schools for the blind and public schools has no real significance when consideration is given to the fact that, aside from greater expense entailed by special equipment and methods used with blind children, public schools are not residential schools.

c. Officers

(1) Governing Boards. There was no one source from which to gather the data included in Table IX regarding the nature of the governing boards of schools for the blind in 1931. The several sources that furnished material are indicated in the footnotes at the end of the table. Table IX gives the name of the governing boards that controlled the affairs of the respective schools for the blind in 1931, and in addition it gives the number of members constituting each board, the number of years composing the term of office of the members, and the way in which the members were appointed.

Table IX reveals that the management of schools for the blind was under the direction of: State Boards or Departments of Education, Boards of Trustees, Boards of Managers, Boards of Directors, State Boards of Control, State Departments of Public Welfare, State Boards of Administrators, Boards of Visitors, Boards of Regents,

Table IX. The Nature of the Governing Boards of the Secondary Schools for the Blind in 1931[1]

School	Board	No. of Members	Term of Office Years	Appointment
Alabama School for the Blind	Bd. of Trustees	14	no data	no data
Arizona School for the Deaf and Blind	State Dept. of Ed.			
	Bd. of Directors	5	3[2]	By Gov.[2]
Arkansas School for the Blind	State Dept. of Ed.			
	Board of Managers	5	no data	no data
California School for the Blind	State Dept. of Ed.	11[2]	4[2]	By Gov.[2]
Colorado School for the Deaf and Blind	State Dept. of Ed.			
	Bd. of Trustees	6	6	Elected
Connecticut Institute for the Blind	State Dept. of Ed.			
	Bd. of Directors	no data	no data	no data
Florida School for the Deaf and Blind	State Bd. of Control	6[3]	no data	By Gov.[3]
Georgia Academy for the Blind	no data	no data	no data	no data
Idaho School for the Deaf and Blind	State Bd. of Ed.	7[3]	5[3]	Elected[3]
Illinois School for the Blind	State Dept. of Public Welfare	no data	4	no data
Indiana School for the Blind	State Dept. of Ed.			
	Bd. of Trustees	4	4	By Gov.
Iowa School for the Blind	State Bd. of Ed.	9	3[3]	no data
Kansas State School for the Blind	State Bd. of Administrators	3	2	Elected
Kentucky School for the Blind	Bd. of Visitors	5	indeterminate	By Gov.
Louisiana State School for the Blind	State Bd. of Ed.	12	no data	Elected
Maryland School for the Blind	Bd. of Directors[3]	14[3]	no data	Elected[3]
Massachusetts School and Perkins Institution for the Blind	Bd. of Trustees	12	1	Elected 8 By Gov. 4
Michigan School for the Blind	State Dept. of Ed.			
	Bd. of Commissioners	5[2]	2[2]	By Gov.[2]
Minnesota School for the Blind	State Bd. of Control	3	6	By Gov.

Table IX. The Nature of the Governing Boards of the Secondary Schools for the Blind in 1931, continued

School	Board	No. of Members	Term of Office Years	Appointment
Mississippi School for the Blind	Bd. of Trustees	5	4^3	By Gov.^{3}
Missouri School for the Blind	State Dept. of Ed.			
	Bd. of Managers	5	4	By Gov.
Montana School for the Deaf and Blind	Bd. of Trustees	2^2	3	By Gov.
Nebraska School for the Blind	State Bd. of Control	3	6	By Gov.
New Mexico School for the Blind	State Dept. of Ed.			
	Bd. of Regents	3	4^2	By Gov.^{2}
New York Institute for the Education of the Blind	State Dept. of Ed.			
	Bd. of Managers	20	1	Elected
New York State School for the Blind	State Dept. of Ed.			
	Bd. of Visitors	7	7^3	By Gov.^{3}
North Carolina State School for the Deaf and Blind	Bd. of Directors	11	4	By Gov.
North Dakota School for the Blind	State Bd. of Administration	3	2^2	By Gov.
Ohio State School for the Blind	State Dept. of Ed.	no data	no data	no data
Oklahoma School for the Blind	State Dept. of Ed.	6^2	4^2	By Gov.^{2}
Oregon State School for the Blind	State Bd. of Control	no data	no data	no data
Pennsylvania Institution for the Instruction of the Blind	State Dept. of Public Instruction			
	Bd. of Managers	24	1^3	Elected^3
South Carolina School for the Deaf and Blind	Bd. of Directors	5	8^2	By Gov.
South Dakota School for the Blind	State Bd. of Charities and Corrections	5^3	6^3	By Gov.
Tennessee School for the Blind	Commissioner of State Institutions	no data	no data	no data
Texas School for the Blind	State Bd. of Control	3^3	5^3	By Gov.^{3}
Utah School for the Deaf and Blind	Bd. of Trustees	6	6	By Gov.
Virginia School for the Deaf and Blind	Bd. of Directors	7	no data	By Gov.

Table IX. The Nature of the Governing Boards of the Secondary Schools for the Blind in 1931, continued

School	Board	No. of Members	Term of Office Years	Appointment
Washington State School for the Blind	Director of State Business Control	1	indeterminate[2]	By Gov.[2]
Western Pennsylvania School for the Blind	Bd. of Directors	9	no data	Elected
West Virginia Schools for the Deaf and Blind	State Bd. of Ed.	6[2]	6[2]	By Gov.[2]
Wisconsin School for the Blind	State Dept. of Control	3[3]	6[3]	By Gov.[3]
42 Total				

1. Unless otherwise indicated the data for Table IX were obtained from Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932.

2. Data obtained from letters from the superintendents of the schools to the author.

3. Data obtained from the school reports.

Boards of Commissioners, State Departments of Public Instruction, State Boards of Charities and Corrections, the Commissioner of State Institutions, and the Director of State Business Control. Eighteen of these schools in 1931 were under the control of State Boards or Departments of Education or under the control of local boards supervised by these State agencies.

It is a sign of progress in the organization and administration of schools for the blind that so many of these special schools have been recognized as a part of the State educational system by being placed under the direct control of the same State educational agencies as control the other educational institutions of the State.[1]

The following quotations show that the schools themselves appreciated this recognition of their educational status.

> Pennsylvania Institution for the Instruction of the Blind. Though incorporated as an "Institution for Instruction" the school was for many years considered a charity. With other schools for the blind and deaf it was placed under the direction of the State Board of Charities, where it remained for nearly half a century, until June 1, 1923, when it was transferred to the State Department of Public Instruction and its educational status was officially recognized.[2]

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[1] Martens, Elise H. "Education of Exceptional Children." Biennial Survey of Education in the United States 1928-30, Chapter XI, Bulletin, No. 20, 1931. Washington: Government Printing Office, p. 5.

[2] "The Pennsylvania Institution for the Instruction of the Blind." Outlook for the Blind, 26:82 (June, 1932).

> Idaho State School for the Deaf and Blind. Fortunately from its inception the school has by statute been under the control of the State Board of Education, which has shown an ardent desire to take care of its needs and provide the best training possible for those children for whom the school was established.[1]

Reference to Table IX shows that the governing boards of thirty-six schools for the blind in 1931 varied in size from one to twenty-four members, with a median of five members. Frequently the Governor of the State and the State Superintendent of Schools were found to be ex-officio members.

The term of office of the members of the governing boards representing twenty-eight schools for the blind in 1931 ranged from one to eight years, with a median of four years.

In Table IX it is found that in twenty-four schools the members of the governing boards were appointed by the governor, frequently with senatorial confirmation. In eight schools the members of the governing boards were elected, and in one school eight of the members were elected and four of them were appointed by the governor.

Counts in his study of boards of education in the United States found that the typical city board of education comprised six members who were elected at large for a term of

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[1] Idaho State School for the Deaf and the Blind, Twelfth Biennial Report 1929-1930. Gooding, Idaho: Printed by the Pupils, Idaho School for the Deaf and Blind, p. 7.

three years. He found that the typical State board of education consisted of seven members who, with the exception of two ex-officio members, were appointed by the governor for a term of four years.[1]

(2) Superintendents. An attempt was made to make a list of the names of the superintendents who held office in the forty-two secondary schools for the blind during the decade 1921-1931. Every available source was used in order to collect these data including correspondence, school reports, and the *Outlook for the Blind*. In many cases it will be found in Table X that the dates given for the assumption of office of superintendent antedated the year 1921, but the period of superintendency extended into the specified decade and was accordingly included in the table. It will be noticed that the terms "principal," "president," and "director" were in some instances applied to the chief school executives and unless such were specified in the footnotes, it may be assumed that the correct designation was "superintendent."

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[1] Counts, George S. *The Social Composition of Boards of Education.* Chicago: University of Chicago, 1927, pp. 79-80.

Table X. Superintendents of the Forty-Two Residential Schools for the Blind during the Decade 1921-1931

School	Superintendent	Term of Office
Alabama School for the Blind	Manning, F. H.	1914-1929
	McNeill, D. A.	1929-
Arizona School for the Deaf and Blind	Griffin, Howard	1920-1929
	Nilson, Roy	1930-
Arkansas School for the Blind	Thornburgh, George	1919-1923
	Thornburgh, Mrs. L. B.	1923-1930
	Brown, W. M.	1930-
California School for the Blind	French, Richard S.[1]	1922-
Colorado School for the Deaf and Blind	Argo, William K.	1899-1922
	McAloney, Thomas S.	1922-
Connecticut Institute for the Blind	Hicks, Gordon[1]	1918-
Florida School for the Deaf and Blind	Walker, Albert H.[2]	1906-1927
	Walker, W. Laurens, Jr.[2]	1927-1928
	Brown, Alfred L.[2]	1928-
Georgia Academy for the Blind	Oliphant, George F.	1921-[4]
Idaho School for the Deaf and Blind	Halliard, Miss E. M.	1920-1923
	Settles, Clarence J.	1923-
Illinois School for the Blind	Woolston, R. W.	1917-
Indiana School for the Blind	Wilson, George S.	1898-
Iowa School for the Blind	Palmer, Francis E.[1]	1918-
Kansas State School for the Blind	Chandler, T. E.	1920-1924
	Wilson, Mrs.Eleanor A.	1924-
Kentucky School for the Blind	Merwin, Miss S. B.	1912-1923
	Martin, C. B.	1923-1930
	Moriarty, Miss C. T.	1930-
Louisiana State School for the Blind	Caldwell, A. J.	1921-
Maryland School for the Blind	Bledsoe, John F.	1906-
Massachusetts School and Perkins Institution for the Blind	Allen, Edward E.[3]	1907-1931
	Farrell, Gabriel[3]	1931-
Michigan School for the Blind	Holmes, Clarence B.	1902-

Table X. Superintendents of the Forty-Two Residential Schools for the Blind during the Decade 1921-1931, continued

School	Superintendent	Term of Office
Minnesota School for the Blind	Dow, Miss J. F.	1920-1922
	Vance, J. E.	1922-1930
	Vevle, Mendus R.	1930-
Mississippi School for the Blind	Batson, M. L.	1918-
Missouri School for the Blind	Green, S. M.	1899-
Montana School for the Deaf and Blind	Menzemer, H. J.[2]	1911-1929
	Griffin, Howard	1930-
Nebraska School for the Blind	Abbott, N. C.	1913-
New Mexico School for the Blind	Pratt, Randolph R.	1909-1927
	Smoll, P. A.	1927-
New York Institute for the Education of the Blind	Van Cleve, E. M.[1]	1914-
New York State School for the Blind	Hamilton, C. A.	1907-
North Carolina State School for the Blind and Deaf	Lineberry, G. E.	1918-
North Dakota School for the Blind	Chapple, B. L.[2]	1907-
Ohio State School for the Blind	Lumb, J. F.	1919-
Oklahoma School for the Blind	Stewart, O. W.	1911-1925
	Stewart, Mrs. O. W.	1925-
Oregon State School for the Blind	Howard, J. W.	1919-1931
	Dry, Walter R.	1931-
Pennsylvania Institution for the Instruction of the Blind	Burritt, Olin H.[1]	1907-
Western Pennsylvania School for the Blind	McAloney, Thomas D.	1906-1922
	Joice, B. S.	1922-
South Carolina School for the Deaf and Blind	Walker, Newton F.	1866-1927
	Walker, W. L.	1927-
South Dakota School for the Blind	Rule, Otis O.[1]	1918-
Tennessee School for the Blind	Wampler, I. S.[1]	1918-
Texas School for the Blind	Bramlette, E. E.	1911-1923
	Brown, M. B.	1924-1927
	Ellis, A. C.	1927-1930
	Allen, W. E.	1930-

Table X. Superintendents of the Forty-Two Residential Schools for the Blind during the Decade 1921-1931, continued

School	Superintendent	Term of Office
Utah School for the Deaf and Blind	Driggs, Frank M.	1899-
Virginia School for the Deaf and Blind	McManaway, H. M.	1919-
Washington State School for the Blind	Chapman, H. R.	1920-1926
	Chapman, Mrs. J. E.	1926-
West Virginia School for the Deaf and Blind	Griffey, H. F.	1921-1923
	DeBerry, Parley	1923-
Wisconsin School for the Blind	Hooper, J. T.	1911-
42 Total	67	

1. Principal.

2. President.

3. Director.

4. Prior to 1921.

An inspection of Table X shows that out of a total of sixty-seven superintendents, thirty-two of them held the position of superintendent for over ten years; fifteen of them held the position for not less than five years and not more than ten years; and twenty of them held the position for less than five years. A further analysis with reference to those superintendents who held office for more than ten years reveals the following distribution: eleven years, one; twelve years, four; thirteen years, six; fourteen years, two; fifteen years, two; sixteen years, one; seventeen years, one; eighteen years, three; twenty years, one; twenty-one years, one; twenty-three years, one; twenty-four years, four; twenty-nine years, one; thirty-two years, two; thirty-three years, one; and sixty-one years, one.

These long periods of active service indicate that there would probably thus have been continuity of administrative and educational policy in the schools over which these superintendents presided.

(3) Staff. Residential schools for the blind have been found to have included generally on their staff: teachers in the various departments, a librarian, a physician, an ophthalmologist, a dentist, and a nurse. The reports of several of the schools, particularly in the case of the dual schools, mentioned a principal besides the superintendent.

In addition, there were found members of the office staff, members of the household department, storekeepers, janitors, engineers, and gardeners.

Briefly reviewing the situation with reference to the support and control of the residential schools for the blind, it may be said that the States have furnished rather liberal educational opportunities for their blind children, but the problem of locating these handicapped children has never been satisfactorily solved. With the exception of five schools whose support has been derived partially from tuition, endowments, and private contributions and partially from State appropriations, the remaining thirty-seven residential schools for the blind have been entirely State supported.

Although these schools have been governed for the most part by boards of control with members either appointed by the Governor of the State or elected, the tendency to place these institutions under the State Department of Education has steadily increased.

The tenure of office of the superintendents of schools for the blind during the decade under consideration has varied widely among the schools. In some schools the superintendents have held their positions for very long periods of time; in other schools several changes have been made within the span of ten years.

The staff of residential schools for the blind has included men and women who have carried on the work of the following departments: school, medical, administrative, household, and school plant.

2. Physical Plant

a. Location

The location and the size of the grounds of the school plants offer certain opportunities that are valuable to the educational life and development within these special institutions. A consideration of these matters is presented in the following section describing the situation as it existed during the decade 1921-1931.

Tables XI and XII give a fair estimate of the extent of property in acres that belonged to the respective residential schools for the blind in the United States in 1931. Table XI which gives the number of acres that the separate schools for the blind possessed is arranged according to the ascending number of acres. Table XII gives the number of acres that the combined schools for the deaf and the blind possessed arranged according to the ascending number of acres. In the case of the Montana School the acreage refers to the Montana State School for the Deaf and the Blind and the Montana State Training School for the Feeble-Minded.

Table XI. The Number of Acres That Comprised the Grounds of the Separate Residential Schools for the Blind in 1931[1]

	Number of Acres
Missouri School for the Blind..................	5
Western Pennsylvania School for the Blind.....	5
Oregon State School for the Blind.............	7
Arkansas School for the Blind.................	7
Mississippi School for the Blind..............	8
Nebraska School for the Blind.................	10
Kansas State School for the Blind.............	10
Louisiana State School for the Blind..........	10
Tennessee School for the Blind................	10
Ohio State School for the Blind...............	11
Kentucky School for the Blind.................	12
Washington State School for the Blind.........	13
New York Institute for the Education of the Blind..................................	16
Connecticut Institute for the Blind...........	18
Pennsylvania Institution for the Instruction of the Blind..............................	19½
Alabama School for the Blind..................	20
New Mexico School for the Blind...............	31¾
California School for the Blind...............	32
South Dakota School for the Blind.............	33
Perkins Institution and Massachusetts School for the Blind..........................	34
North Dakota School for the Blind.............	40
Illinois School for the Blind.................	42
Michigan School for the Blind.................	45
Minnesota School for the Blind................	50
Iowa School for the Blind.....................	53
Indiana School for the Blind..................	60
New York State School for the Blind...........	60
Texas School for the Blind....................	73
Oklahoma School for the Blind.................	99
Maryland School for the Blind.................	100
Wisconsin School for the Blind................	107
31 Total	

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1. The data for Table XI were obtained from the Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932.

Table XI shows that among the separate residential schools for the blind the number of acres that comprised the school grounds in 1931 ranged from 5 to 107 acres. The Missouri School for the Blind and the Western Pennsylvania School for the Blind had the smallest acreage; namely, 5 acres apiece, and the Wisconsin School for the Blind had the largest acreage; namely, 107 acres. The median number of acres for these schools was 20.

Table XII. The Number of Acres That Comprised the Grounds of the Dual Schools for the Deaf and Blind in 1931[1]

School	Number of Acres
Colorado School for the Deaf and Blind..........	24
Florida School for the Deaf and Blind...........	30
Idaho State School for the Deaf and Blind.......	40
Arizona School for the Deaf and Blind...........	79
North Carolina School for the Deaf and the Blind.......................................	85
Virginia School for the Deaf and Blind..........	98
South Carolina School for the Deaf and Blind....	150
Utah School for the Deaf and Blind..............	195
West Virginia State Schools for the Deaf and Blind.......................................	550
Montana State School for the Deaf and Blind and the Montana State Training School for the Feeble-Minded.............................	1071
10 Total	

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1. The data for Table XII were obtained from the Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932.

Among the combined schools for the deaf and the blind the number of acres that comprised the school grounds ranged from 24 to 1071 acres. The Colorado School for the Deaf and Blind had the smallest acreage; namely, 24 acres, and the Montana State School for the Deaf and Blind and the Montana State Training School for the Feeble-Minded combined had the largest acreage; namely, 1071 acres.

Residential schools for the blind, as a rule, have had an acreage large enough to accommodate comfortably their several buildings, and extensive space for outdoor activities. However, there have been instances where the reverse situation was lamentably true, for example, the Mississippi School for the Blind claimed:

> We are very much hindered on our campus, which is very small, that the children have no room to play or take the much needed exercise.[1]

Table XIII gives the names and the locations of the forty-two residential schools for the blind as they were found to be in 1931. Since the names of the States in which the schools were located occurred in the titles of the schools, they were omitted elsewhere in the table. The Directory of Activities for the Blind in the United States and Canada, published in 1932, furnished the data for this table.

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[1] The Biennial Report of the Trustees of the Mississippi School for the Blind, From June 30, 1925 to July, 1, 1927, p. 43.

Table XIII. Name and Location of the Forty-Two Residential Schools for the Blind in 1931

School	Location
Alabama School for the Blind...........	Talladega
Arizona School for the Deaf and Blind..	Tucson
Arkansas School for the Blind..........	Little Rock
California School for the Blind........	Berkeley
Colorado School for the Deaf and Blind.	Colorado Springs
Connecticut Institute for the Blind....	Hartford
Florida School for the Deaf and Blind..	St. Augustine
Georgia Academy for the Blind..........	Macon
Idaho School for the Deaf and the Blind	Gooding
Illinois School for the Blind..........	Jacksonville
Indiana School for the Blind...........	Indianapolis
Iowa School for the Blind..............	Vinton
Kansas State School for the Blind......	Kansas City
Kentucky School for the Blind..........	Louisville
Louisiana State School for the Blind...	Baton Rouge
Maryland School for the Blind..........	Baltimore
Perkins Institution and Massachusetts School for the Blind................	Watertown
Michigan School for the Blind..........	Lansing
Minnesota School for the Blind.........	Faribault
Mississippi School for the Blind.......	Jackson
Missouri School for the Blind..........	St. Louis
Montana School for the Deaf and Blind..	Boulder
Nebraska School for the Blind..........	Nebraska City
New Mexico School for the Blind........	Alamogordo
New York Institute for the Education of the Blind........................	New York
New York State School for the Blind....	Batavia
North Carolina State School for the Blind and Deaf......................	Raleigh
North Dakota School for the Blind......	Bathgate
Ohio State School for the Blind........	Columbus
Oklahoma School for the Blind..........	Muskogee
Oregon State School for the Blind......	Salem
Pennsylvania Institution for the Instruction of the Blind............	Overbrook
South Carolina School for the Deaf and the Blind...........................	Cedar Springs
South Dakota School for the Blind......	Gary

School	Location
Tennessee School for the Blind.........	Nashville
Texas School for the Blind.............	Austin
Utah School for the Deaf and the Blind.	Ogden
Virginia School for the Deaf and the Blind........................	Staunton
Washington State School for the Blind..	Vancouver
Western Pennsylvania School for the Blind............................	Pittsburgh
West Virginia Schools for the Deaf and the Blind.........................	Romney
Wisconsin School for the Blind.........	Janesville
42 Total	

Residential schools for the blind were found to be located in cities, in suburbs, and in rural districts. Many of these schools were located in cities. In 1930 these cities varied greatly in size; for instance, the Idaho School for the Blind was situated in Gooding, a city with a population of 7580;[1] the Kansas State School for the Blind was located in Kansas City which had a population of 121,857;[2] the Western Pennsylvania School for the Blind was in the city of Pittsburgh which had a population of 669,817;[3] and the

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1. Fifteenth Census of the United States, 1930, Population, Volume I. Washington: Government Printing Office, 1931, p. 262.

2. Ibid., p. 20.

3. Ibid., p. 18.

Missouri School for the Blind was located in St. Louis, a city with a population of 821,960.[1]

The tendency particularly during the last decade has been to choose suburban districts as locations for residential schools for the blind.[2] Most of the schools built before 1900 were located in cities and consequently as these cities prospered and grew, the city environment became less desirable from the standpoint of such disturbing elements as noise and commotion. Typical examples of schools located in suburbs in 1931 were: Perkins Institution and Massachusetts School for the Blind, the New York Institute for the Education of the Blind, the Texas School for the Blind, and the Maryland School for the Blind.

A few schools, for example, the South Carolina School for the Deaf and Blind, have enjoyed the benefits of quietness and country life, but these advantages have been offset by the lack of opportunities offered by proximity to educational centers.[3]

There have been several factors which schools for the blind have been obliged to take into consideration in choosing

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1. *Fifteenth Census of the United States, 1930*, Population, Volume I. Washington: Government Printing Office, 1931, p. 18.

2. French, Richard S. *op. cit.*, p. 270.

3. *Ibid.*, p. 271.

a site. When the New York Institute for the Education of the Blind sought a new location in 1923, the following considerations determined the choice of their new site: (1) accessibility, i. e., the school had to be easily reached and with as little expense as possible; (2) availability, i. e., the typography of the land had to be conducive to natural drainage and a healthy situation, and likewise remoteness from distracting noises characteristic of a large city had to be considered; (3) extent, i. e., the grounds had to be large enough to accommodate the buildings adequately and allow sufficient room for out-of-doors activities; and (4) location, i. e., the site had to be as near as possible, with the above factors considered, to the center of the city.[1]

Concerning the wisdom displayed in choosing a site with the forenamed requirements E. M. Van Cleve said:

> That the Board of Managers did well in giving the blind youth of New York and vicinity, and others who might be drawn to the Institute, a school located in a region sufficiently remote from the noise and bustle of America's greatest city, yet near enough to that city's center to render its advantages easily accessible, has been already attested by the school's experience of nearly two years in its new quarters. We have enjoyed the greater quiet of a semi-urban location, the large grounds, becoming rapidly beautiful as grass and trees and shrubbery grow, with space for much outdoor activity, the commodious and comfortable living quarters, and, best of all, the school building with its large well-lighted rooms and excellent equipment. The city's principal concert

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1. Year-Book of the New York Institute for the Education of the Blind, 1923. New York: the Bradstreet Press, 1923, pp. 31-33.

> halls, shopping districts, places of amusement are an hour away by the present public conveyances, but the staff have not been too much shut away from these, and the pupils' attendance at recitals, concerts, etc. has been arranged without difficulty.[1]

The Indiana School for the Blind has very recently moved to its new location on Seventy-Fifth Street, Indianapolis. The new plant has been in use only since September, 1930. Before choosing a new site and constructing new buildings, George S. Wilson, Superintendent of the Indiana School for the Blind, made an extensive as well as intensive study of more than a score of schools for the blind in the United States and Europe. In summarizing the progress which has been made relative to school sites within recent years, he said:

> Ample grounds have generally been secured; care has been taken to give ethical and aesthetical surroundings; sanitation has received proper emphasis. Opportunity for self-expansion has been duly considered; contact with animal and vegetable life has been provided. In some cases intermingling with business and social life, by the older students, has been permitted.[2]

As a result of his investigations and long experience, he claimed:

> No site should be selected which will not afford the following advantages and resources:

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1. Year Book of the New York Institute for the Education of the Blind, 1926. New York: the Bradstreet Press, 1926, p. 25.

2. Seventy-Sixth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1922. Indianapolis: Wm. B. Burford, 1923, p. 12.

1. Ample railroad and street car or interurban facilities.
2. Good water, drainage, and sewer possibilities.
3. Good neighborhood and accessibility to churches.
4. Wholesome environment.
5. Not less in extent than twenty acres.[1]

The descriptions given in the school reports show that many of these institutions had very beautiful grounds, made attractive by numerous trees, shrubs, vines, flowers and wide lawns. Many of the sites had natural, pristine beauty, but where this was lacking, frequently landscape gardening transformed the grounds and created beautiful surroundings which are essential to the aesthetic growth and development of the pupils. The time has arrived when the aesthetic values have been realized and their influence on the growing child is not disavowed. Schools for the blind, as well as public schools, have been putting forth recently definite efforts to beautify their school grounds and progress has been made commensurate with the available financial resources. The standards that characterize many modern school grounds throughout the country are found in the following quotation.

> A man feels more the master of his fate when well clothed than in rags. It is equally true that a child will aspire to nobler aims in contact with beautiful surroundings. It is important that the community should foster a

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[1] Seventy-Fifth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1921. Indianapolis: Wm. B. Burford, 1922, p. 10.

love of beauty, as it makes for better citizenship. To merely solve the practical requirements of living does not give evidence of as high a state of civilization as to set about the solution in a beautiful way. The school as the training house of the people must take this truth into consideration. It is no longer satisfactory that the school and its grounds and buildings be adequate for instruction purposes; they should be beautiful as well. We must not tolerate conditions formerly prevailing when the school building reared itself on a dusty, treeless expanse of earth. For the child who comes from a home equally unattractive, such a place offers nothing that will satisfy the innate longing for the beautiful,--an instinct modern civilization must find the means to develop. With such development a long step in advance toward the eradication of unwholesome living conditions will have been made.

It is no longer believed that the school is confined to the four walls of the building. Certain activities of the child are housed within walls; others are "housed" out-of-doors. The architecture of the school building, through daily inspiration, develops good taste in the child. Pictures on the wall, copies of the Masters, stimulate aesthetic appreciation. Similarly the pupils become familiar with the best in every sphere of human thought and endeavor. In the modern school this application of good principle does not confine itself to the building; it is continued into the school grounds, where it endeavors to provide the best environment for the activities that are to take place outside the building itself. Open-air activities are both recreational and vocational. They increase in number and complexity with the growth of the child, requiring more and more space and involving greater expense. To provide an economical arrangement of the areas required by these activities, the unity and order of which becomes a source of beauty to be enhanced by judicious planting, is the function of good design applied to school grounds.[1]

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[1] Gilkey, Howard "Landscape Development of School Grounds," Chapter III, School Architecture by John J. Donovan and Others. New York: The Macmillan Co., 1921, p. 61.

Two examples are presented to show that schools for the blind have not disregarded the beauty of setting and environment. The following quotation graphically describes the grounds of the Minnesota School for the Blind in Faribault.

> The institution buildings are beautifully situated in a delightful park on a high bluff overlooking the river valley and the city, with spacious grounds, pleasant walks, and abundant shade trees.[1]

The site of the Kansas School for the Blind has been characterized in the following words:

> The School grounds contain 9.6 acres of undulating land, with a natural growth of trees. The land slopes to the eastward and includes a view of Waterway Park, one of the beauty spots of Kansas City, Kansas. The grounds are well laid out, with paved drives and walks, which furnish ample space for exercise.[2]

On the whole, schools for the blind have enjoyed extensive, attractive grounds well suited to their general and specific needs. These grounds have been larger in extent than public school grounds, but the beauty of the grounds has been quite comparable in both types of schools. As a rule, the grounds of schools for the blind have had a more

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[1] Minnesota School for the Blind, Faribault, Minnesota, Twenty-Second Biennial Report, for the Two Years Ending June 30, 1922, p. 29.

[2] Twenty-Third Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1922. Topeka: B. P. Walker, State Printer, 1922, p. 7.

beautiful natural setting, but this was matched by the landscape development of the public schools.

Although schools for the blind have been located in cities, suburbs, and rural districts, suburbs have been the most popular sites for the newest of these plants since they have meant more extensive grounds and a more wholesome location than crowded, congested cities and their accessibility and availability have been advantages not afforded by rural sections.

b. Types of Buildings

The physical plant is an extremely important agency in carrying on the instructional process, and particularly is this true with reference to residential schools for the blind where the pupils live twenty-four hours a day for approximately nine months a year from the time they enter school until their elementary and secondary education is completed.

The older plants possessed large buildings, several stories in height, built usually of stone or brick. Architecturally they resembled the public school edifices of the same period of construction. Needless to say, they are inadequate for present day needs and purposes, and are one by one being condemned as unsafe, unsanitary, and otherwise unsatisfactory. They seemed to fit the needs of the time when they were built however, and were in consonance with the

educational objectives of their time.

George S. Wilson aptly described the typical situation existent primarily during the first eighty years of education for the blind in this country.

> The early schools for the blind were generally of one building, with the home idea predominating. An effort was made to mould into one family an incongruous mass, widely divergent. Some success was obtained at an immense educational waste. No effort was spared to direct and to protect the student and to prevent his contamination by the outside world. His life was largely one of suppression and not one of self-developed expression. Closely watched, closely housed, the "Ten Commandments" expanded into hundreds to direct his routine activities, his environment was not conducive to the development of a self-directing, moral-acting citizen.[1]

As if these plants did not seem formidable enough in appearance by their large, substantial, brick or stone structures, usually the grounds were enclosed by high stone walls thus discouraging contact with the "outside" world. These early school buildings symbolized the formal, academic, nonsocial standards that they maintained within their organizations.

The early administration buildings were the center of the school plant and when there were other buildings, they were grouped about this central building, at sometimes

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1. Seventy-Sixth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1922. Indianapolis: Wm. B. Burford, 1923, p. 12.

inconvenient distances. The Tennessee School for the Blind furnishes a typical example of an administration building constructed during the nineteenth century.

> The main building, three and four stories in height, is in the center of a ten-acre campus. It is irregular in shape, with a three hundred and fifty foot front and has four wings extending one hundred feet to the rear.
> On the first floor are the administration and social rooms, with the social dining-room, fifty by eighty feet, in the rear; class rooms; studios; practice rooms; the library and the study halls. The other floors of the main building are largely used for dormitory purposes, with the exception of the wing over the dining room which is the assembly room.[1]

C. A. Hamilton decried the lack of proper facilities in the school building of the New York State School for the Blind in these words:

> A recent visit to four midwestern schools for the blind has emphasized the inadequacy of our present buildings, especially our main building. This building has been in use sixty years. Its arrangement is very different from that of modern schools and institutions. It is not fireproof and though it is well equipped with fire escapes, fire risers and fire extinguishers, the fact that most of the pupils sleep on the third floor constitutes an ever present fire hazard. Furthermore, in spite of annual painting and repairs there is the shabbiness of age evident in many parts of the building which ought not to be found in a State institution belonging to and supported by the great Empire State. Our blind pupils are entitled to better appointed and especially to safer living quarters. These compare very unfavorably with accommodations furnished in most other State institutions. Our educational work is hampered by

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1. Report of the Tennessee School for the Blind, Sessions 1923-1925. Nashville: Printing Department Tennessee Industrial School, p. 7.

> lack of suitable rooms for library and class use and for music practice. There are no sitting rooms or study rooms for the pupils. They are obliged to study and pass their spare time in their sleeping rooms, most of which are occupied to their full capacity. We feel that the nature of the public service for which the school is maintained, the high order of intelligence of the majority of our pupils and the record of the school for over half a century, all justify us in seeking to secure from the State appropriations to furnish us with more up-to-date, more convenient and safer buildings.[1]

In striking contrast to this early type of administration building has been the school building erected according to the modern plan chiefly during the past twenty years. The following description of the California School for the Blind will serve to illustrate the comparison and to point out the merits of the modern building.

> The school building has a magnificent site on two of the most beautiful streets of a beautiful city and it is to the credit of the designer that it adds to the appearance of those streets while not sacrificing one bit of utility to mere ornament, even the tower rooms being devoted to specific utilitarian purposes. The west wing of the building houses the music department, with three large studios, a printing room, two store-rooms and seven small studios. The auditorium above serves for assembly purposes and for large ensemble work and has a fine pipe organ, a grand and an upright piano, radio, and orthophonic Victrola, plus stage and side rooms for dramatics. It is the scene of all major social events and entertainments, concerts, lectures and plays, besides regular assemblies and certain religious services.

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1. Sixtieth Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1927-1928. Albany: J. B. Lyon Co., Printers, 1928, pp. 13-14.

> The center part of the school building houses the small business offices, the upper primary classrooms, the junior and senior high school classes and supervised study rooms, the typing rooms, the science and geography room and the library. The rooms in this part are so planned that the advanced students have all study facilities at hand with a minimum of change from room to room.
>
> In the east wing are three classrooms, all of exceptional size and with unusually complete equipment and storage space. These accommodate the younger children and an opportunity class, which cares especially for children who have lacked educational opportunity and who must make up for lost time. The kindergarten room is especially attractive, with its real merry-go-round with real horses--only these are of iron. Across the corridor, behind insulated doors, are the piano-tuning rooms and store-rooms. Above are the workrooms and shops, with basketry and weaving, plus some additional classwork in one; sewing and dressmaking in another; and general shopwork for boys in the third, which is a room of great size, containing the most up-to-date equipment....[1]

The early quarters of the early schools for the blind were of the congregate type, i. e., the children were housed in one or two buildings, heed having been paid to separating the sexes, but little attention was directed to other bases of segregation. In instances where the school enrollment was small, boys and girls were housed in different wings of the same building, while in the large schools separate buildings housed the opposite sexes. The Utah

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[1] French, R. S. "The New Plant of the California School for the Blind." Outlook for the Blind, 25:147-148 (December, 1931).

School for the Blind[1] and the North Dakota School for the Blind[2] were representative small schools that housed their children within the confines of one building. The New Mexico School for the Blind[3] and the South Dakota School for the Blind[4] had buildings for the boys and girls respectively. Generally in the congregate type of buildings there were large dormitories, often filled beyond capacity and sometimes makeshift accommodations were provided. Some buildings had a group of small dormitories which accommodated two to six students.

Since the beginning of the twentieth century the cottage system has become an accepted plan in the construction of new school plants. Perkins Institution and Massachusetts School for the Blind adopted the cottage family plan in its new plant at Watertown. The Maryland School for the Blind also incorporated this plan in its new plant. Other schools have built according to the cottage system, for example, the

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[1] Biennial Report of the Utah School for the Deaf and the Blind, Forty-First and Forty-Second Years, 1925-1926. Ogden: Printing Department of the School, p. 10.

[2] Tenth Biennial Report of the Superintendent of the North Dakota School for the Blind, To the Board of Administration for the Biennial Period Ending June 30, 1926, p. 723.

[3] Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1922, Alamogordo, p. 14.

[4] South Dakota School for the Blind at Gary, 1923-1924, pp. 3-4.

Texas School for the Blind and the North Carolina State School for the Blind and Deaf but with less emphasis on complete segregation of the groups.

Under the cottage system groups of students varying from twenty to thirty have been housed in separate and distinct cottages and each household has been complete within itself. To fully comprehend the details of the cottage plan of housing descriptions of several schools of this nature are presented.

The Perkins Institution has been described by Dr. Allen as follows:

> The distinctive feature of Perkins Institution is its grouping by families. The term "cottage system" does not describe it....when we rebuilt in the suburbs we embodied the plan of bringing both teacher and taught together in complete little families for living and of requiring them to leave their houses daily only for schooling, outdoor recreation, etc. This plan avoids the unsocializing effects of congregating young "socially competent" people having a common handicap and in our judgment justifies it.
>
> ....The whole plant is beautiful alike in simplicity and setting and is eminently practical because planned to foster the need of those who live in it--the need of participation, socialization, and optimism....
>
> The Perkins Institution community at Watertown consists of about four hundred people, three-fourths being pupils, the rest officers, teachers and helpers. Its essential buildings are under seven roofs: Howe Hall, the boys' close, the girls' close, the kindergarten, the power house, the hospital, and the director's house. Last year we added a steward's house, a head gardener's house and a garage. There are six schools,--two kindergartens, two primary schools, and a boys' and a girls' upper school....[1]

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[1] Perkins Institution and Massachusetts School for the Blind, Ninety-First Annual Report of the Trustees, 1922. Boston: Wright and Potter Printing Co., pp. 14-15.

The following description of the Perkins Institution and comments about it by George S. Wilson are pertinent at this point.

> The school at Boston, called the "Massachusetts School and Perkins Institution for the Blind," is one in which the home idea and close supervision largely predominate. It has financial advantages far beyond most similar schools in the United States. It is organized upon the plan of family grouping in which little attention is given to economic restrictions. It has a numerous and highly paid faculty of well educated and proficient instructors. The sexes are completely separated in all classroom work and social entertainment. Separate dining room, kitchen, etc. are provided for each family of twenty pupils. The usual labor incident to families is required of students. The buildings are fireproof, low, narrow, Gothic style, and of brick, with slate roofs. There is a separate kindergarten building divided into family accommodations similar to those for the older pupils. In the selection of the site, great care was taken to secure many natural and artificial advantages. The campus contains thirty-four acres and is beautifully situated, fronting on the Charles River for 1600 feet. It is within five and one-half miles of Boston City Hall and within three miles of Harvard and within six miles of six other colleges. It has steam and trolley accommodations and it is within four and one-half miles of Symphony Hall. There are several village churches within ten minutes walk of pupils. Ample hospital accommodations are provided for the ailing and the sick. The announced object of the school is "to live happily and efficiently in school and out of school by giving ample laboratory work and to providing attractions." Yet, with all its advantages and the great care and intelligence in its planning, it must needs be modified greatly to be adaptable to the requirements of our western and northern schools. Its isolation from official connections with the general public school system, the large amount of money available for its operation, and the idea of separation into families, while probably in harmony with eastern civilization, would

not be acceptable in most of the western states.[1]

The Maryland School for the Blind, which has adopted this system, showed the possibilities of the cottage system in a school with an enrollment considerably smaller than that of the Perkins Institution. It is briefly described as follows:

> The School is conducted on the cottage plan there being a cottage for the younger boys, one for the older boys, one for the younger girls and one for the older girls, in each of which there is a house-mother, maid and cook. Every effort is made to approach home life as nearly as possible. There are several teachers in each cottage, one of whom has charge of each table at meals. There are from five to seven pupils at a table and an effort is made to cultivate good table manners and stimulate interesting conversation. The cottage is a place for sociability and recreation; and pupils go to the administration building for classes and study.[2]

The Texas School for the Blind in Austin erected a new school plant in 1917 which has been considered one of the most complete and best equipped plants in this country. A description of its cottage system is as follows:

> Our five cottage homes for the pupils--A, B, D, E, and F--are all alike in size, arrangement

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1. Seventy-Sixth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1922. Indianapolis: Wm. B. Burford, 1923, pp. 12-13.

2. Biennial Report, Sixty-Sixth and Sixty-Seventh Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1928-September 30, 1930, Published by the Corporation, January, 1931, p. 35.

> and conveniences. They are each managed by one resident teacher, one housemother, one housekeeper, and one maid. A description of cottage A suffices for all. The building is two-story, with living room, study hall, housekeeper's room, kitchen, dining room and three rooms for students on the first floor, and with nine teachers' rooms on the second floor. Students care for their own rooms and do most of the upstairs cleaning.[1]

Doubtless, the greatest advantage of the cottage system has been the home environment that has been developed. It has been possible for high standards to be inculcated and maintained by the close contact of pupils and teachers living together. Highly important has been the fact that the students have been given an opportunity to participate in the work and care of their cottages.[2]

Those schools which have been fortunate enough to have the cottage system have been enthusiastic about it. The superintendent of the North Carolina School praised the system which was introduced into his school in 1923 with this statement:

> The cottage system has made possible a home life and individual training for students far superior to the congregate system....[3]

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1. Dedicatory Number. Catalogue and Announcement Texas School for the Blind, Austin, Texas, 1930-1931. Austin: Von Boeckmann-Jones Co., Printers, pp. 18-19.

2. Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, pp. 47-48.

3. Report of the State School for the Blind and the Deaf, Raleigh, North Carolina, 1922-1924. Raleigh: Edwards and Bboughton Printing Co., 1924, p. 16.

The adoption of the cottage system has not been feasible in some of the schools, chiefly because of the lack of funds to put it into effect rather than the cost of maintenance after it has been established. It is interesting to note that the actual cost of maintenance has been minimized by the amount of student help that has been intrinsically a part of it, thus eliminating a good deal of the hired labor. In lieu of this, a modified cottage system has been tried and adopted with success. In this type of system, one building has been used for the boys and another for the girls, while the older and younger children in each house have been entirely segregated except for meeting three times a day in a common dining room. The California School for the Blind[1] and the Louisiana State School for the Blind[2] are examples of schools which have adopted the modified cottage system. It has been possible, too, sometimes to make arrangements in the older buildings to approximate this modified system, but the expense of making the changes has not always warranted the expenditure of so much money on old buildings.

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1. French, R. S. "The New Plant of the California School for the Blind." Outlook for the Blind, 25:145-148 (December, 1931).

2. Biennial Report of the Louisiana State School for the Blind, June 30, 1930, Baton Rouge, Louisiana, pp. 7-17.

There have been other buildings that were often included in the school plants for the blind such as an infirmary, gymnasium, industrial building, superintendent's residence, power house, laundry, garage, and living quarters for the help. Sometimes some of these buildings have been found to be a part of other buildings, so that no real uniformity in this connection has existed. The Western Pennsylvania School for the Blind, for instance, listed its buildings as: (1) Kindergarten Cottage; (2) Power House and Laundry; (3) Main Building; (4) Porterfield Memorial Gymnasium; (5) Teachers' Cottage and Industrial Building.[1] The Kansas School for the Blind listed these buildings: main building, teachers' cottage, school building which includes a gymnasium, barn, bungalow used as a playhouse, hospital, industrial building, laundry and power house.[2] The Iowa School for the Deaf and Blind listed eight buildings; namely, main building, gymnasium, hospital, laundry, power plant, greenhouse, industrial building, and barn.[3]

In most of the schools for the blind by 1931 provisions

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1. Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-First *Annual Report*, 1928, p. 2.

2. Twenty-Third *Biennial Report* of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1922. Topeka: B. P. Walker, State Printer, 1922, pp. 7-9.

3. The Iowa School for the Blind, Vinton, Iowa, 1930-1931, pp. [8-9].

were made for a gymnasium and a hospital, either in separate buildings of their own or in connection with one of the other buildings. However, the lack of such provisions was found in a few cases, for instance, the Florida School for the Deaf and the Blind was in need of a gymnasium;[1] the South Carolina School for the Deaf and the Blind was in need of a gymnasium;[2] and the Wisconsin School for the Blind was in need of an infirmary.[3]

In conjunction with the gymnasium some of the schools had swimming pools as in the case of the New York State School for the Blind,[4] the North Carolina School for the Deaf and the Blind,[5] the Pennsylvania Institution for the Instruction of the Blind,[6] the Western Pennsylvania School

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1. Florida State School for the Deaf and the Blind, Saint Augustine, President's Biennial Report, 1928-1930, p. 29.

2. Eighty-First Annual Report of the South Carolina School for the Deaf and the Blind, Cedar Springs, 1929. Printed under the Direction of the Joint Committee on Printing, General Assembly of South Carolina, pp. 4; 12.

3. Twenty-Third Biennial Report of the Wisconsin School for the Blind, Biennial Period Ending June 30, 1928, Janesville, Wisconsin, p. 390.

4. Sixty-Second Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1929-1930. Albany: J. B. Lyon Co., Printers, 1930, p. 16.

5. Report of the State School for the Blind and the Deaf, Raleigh, North Carolina, 1922-1924. Raleigh: Edwards and Bboughton Printing Co., 1924, p. 21.

6. "The Pennsylvania Institution for the Instruction of the Blind." Outlook for the Blind, 26:81-82 (June, 1932).

for the Blind,[1] the Wisconsin School for the Blind,[2] the Perkins Institution and Massachusetts School for the Blind,[3] and the Illinois School for the Blind.[4]

Not all recreational activity has been confined within the school buildings as the grounds of the residential schools for the blind have been for the most part extensive and thus ample space has been afforded for outdoor activity by the pupils.

One of the most complete plans for recreation out-of-doors has been sketched by the Indiana School for the Blind which is as follows:

> In addition to separate playgrounds for each dormitory, there is a campus for girls of eight acres, and one for boys of twelve acres. There is constructed a lake of four and one-half acres, containing an island of two acres. This lake will afford opportunity for boating, swimming, fishing, and skating in proper seasons. There will be constructed toboggan slides, sand gardens, walks, and tea houses for the entertainment of the students in suitable weather. The athletic field will have a race track, a ball diamond,

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[1] Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-Second Annual Report, 1929, p. 21

[2] Twenty-First Biennial Report of the Wisconsin School for the Blind for the Biennial Period Ending June 30, 1924, Janesville, Wisconsin, p. 242.

[3] Perkins Institution and Massachusetts School for the Blind, Ninety-Fifth Annual Report of the Trustees, 1926, p. 12.

[4] "The Illinois School for the Blind." Outlook for the Blind, 25:112 (September, 1931).

> and athletic apparatus for outdoor games, and exercises. The semicircular bluff will overlook a lawn, surrounded by a garden of cultivated flowers, on which lawn will be given in mild weather field masques, lawn fetes, Maypole dances, drills, etc.[1]

The Kansas School for the Blind described its outdoor facilities as follows:

> The grounds are well laid out, with paved drives and walks, which furnish ample space for exercise. Well assorted playground apparatus encourage the pupils to healthful effort, while swings, sand beds and a merry-go-round offer opportunities for recreation.[2]

The California School for the Blind has had splendid facilities for outdoor life. For the girls were found the following opportunities:

> Around the house are attractive grounds and three playgrounds--one in a small grove of evergreen eucalyptus, one with a skating oval and lawn, one with swings, slides, sand box, merry-go-round, teeters and rock-a-bye. Thus the girls can live a full and normal life without making many excursions beyond their own yard.[3]

The provisions for outdoor activity for the boys were found to be:

> A covered porch, playground with swings,

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1. Eighty-Second Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1928, To the Governor, Indianapolis, p. 62.

2. Twenty-Third Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1922. Topeka: B. P. Walker, State Printer, 1922, p. 7.

3. French, R. S. "The New Plant of the California School for the Blind." Outlook for the Blind, 25:146 (December, 1931).

> teeters, merry-go-round, rock-a-bye, climbing ladders, swinging rings, slide and sand-box, and general utility court for tennis, basketball, and "tin can alley"...A grove covering acres, a steep open hillside above, a Boy Scout hut, and many trails inviting hiking parties.[1]

Taken as a whole, there has been considerable progress made in the construction of new buildings in which has been carried on the instruction of the blind within the last quarter of a century. In the building programs emphasis has been placed upon safety, convenience, comfort, efficiency, durability, and adaptability. This last mentioned factor has been one that has looked to the future and has made flexibility and expansibility possible, since neither enrollment nor curricular needs in these schools have been constant.

The new plants have been found to have one or two story compact buildings, simple in architecture and well suited to their setting. Initial expense and maintenance have been given due consideration so that there has existed little ground for the charge of extravagance.

All of the plants constructed before 1900 were of the congregate type, but since that time an increasing number of plants have adopted the cottage or modified cottage system. The latter plan has provided opportunities by which the pupils have been given the benefits of good, wholesome home

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1. French, R. S. "The New Plant of the California School for the Blind." Outlook for the Blind, 25:147 (December, 1931).

life where a spirit of respect, cooperation, and service has prevailed.

The evidence has shown that generally schools for the blind have provided adequate opportunities for outdoor recreation by means of playgrounds, athletic fields, lawns, etc. Those schools that have been deficient in this respect at least have appreciated the value and the need of these facilities and will install them in their plants when sufficient money to finance them is available. Thus it has been seen that the improved conditions under which these handicapped children have been living have had the salutary effects of their better health, increased happiness, and greater educational progress.

c. Equipment

As has been observed, there was little variation to be found between the type of buildings, especially the school buildings, used by the blind and the sighted. The real divergence, however, has taken place in the matter of equipment, and even in this instance there has been more uniformity than one would concede at first thought. To be specific, the gymnasium equipment for both classes of children has been the same; likewise, the equipment of the typewriting rooms has been identical, inasmuch as there were found in both schools typewriters of standard makes, dictaphones, victrolas,

and the like. The greatest difference has been found to be in the substitution of embossed for print literature and the facilities for writing the embossed systems. The equipment used in pursuing the industrial or vocational subjects has differed to some extent but the deviation was rather in the kinds of vocational courses included in the program of studies in the two classes of schools than in the actual equipment necessary for the conduct of the work itself.

A survey of the catalogues published annually and biennially since 1921 by the residential schools for the blind revealed that the equipment for each department engaged in secondary work was as follows: the library contained a collection of embossed literature of both a general and a specific nature, a variety of Braille magazines published weekly, monthly, and quarterly, and a collection of print books for reference by the teachers;[1] the literary department possessed such educational apparatus as: Hall Braille writers, Braille

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[1] Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley: Department of Printing, California School for the Deaf, pp. 10; 13.

Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Von Boeckmann-Jones Co., Printers, p. 19.

Perkins Institution and Massachusetts School for the Blind, Annual Report, 1929, pp. 20; 39-40.

Twenty-Sixth Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1928. Topeka: B. P. Walker, 1928, p. 21.

hand slates and styluses, grooved boards for writing, relief maps, dissectible maps, globes, models of plant and animal life, simple laboratory equipment, and plasticene for modeling;[1] the music department was equipped with pianos, in most schools a pipe organ, radios, string and wind instruments, victrolas, and in several schools a Braille

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[1] Sixty-Ninth Annual Report of the Superintendent of the Alabama Institute for Deaf and Blind, July 1, 1929--June 30, 1930. Talladega: Printed by the Pupils of the School for the Deaf, 1930, p. 16.

California School for the Blind, Third Biennial Report, For the Period Ending June 30, 1928. Berkeley: Printed by the Class in Printing, California School for the Deaf, pp. 15; 24; 26.

Thirty-Seventh Biennial Report of the Missouri School for the Blind to the Fifty-Sixth General Assembly, January 1, 1931, p. 16.

The New York Institute for the Education of the Blind, Year-Book, 1925, Ninetieth Annual Report of the Board of Managers. New York: the Bradstreet Press, 1925, p. 33.

Information for the Parents and Friends of Blind and Partially Blind Children, Oregon State School for the Blind, Salem, 1927. Salem: State Printing Department, 1927, p. 24.

South Dakota School for the Blind at Gary, 1922-1924, p. 7.

Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin: Von Boeckmann-Jones Co., Printers, p. 20.

Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fourth Annual Report, 1921, p. 10.

stereotype machine and press for embossing music;[1] the physical education department had with few exceptions a gymnasium in which were found the variety of equipment appropriate to its activities;[2] the industrial or vocational department contained standard sewing machines, cutting tables,

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[1] Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley: Department of Printing, California School for the Deaf, p. 10.

Florida School for the Deaf and Blind, "Bulletin Board." Outlook for the Blind, 24:52 (December, 1930).

Twenty-Seventh Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1930. Topeka: B. P. Walker, State Printer, 1930, p. 8.

Year-Book of the New York Institute for the Education of the Blind, Eighty-Ninth Annual Report of the Board of Managers, 1924. New York: the Bradstreet Press, 1924, p. 25.

Twenty-Eighth Biennial Report of the Oregon State School for the Blind for the Biennial Period Ending September 30, 1928, Eighth Biennial Report to the Oregon State Board of Control, Salem, Oregon, p. 157.

Perkins Institution and Massachusetts School for the Blind, Annual Report, 1930, p. 37.

Sixteenth Biennial Report of the Superintendent of the South Dakota School for the Blind Made to the State Board of Charities and Corrections for the Biennial Period Ending June 30, 1930, p. 4.

Catalogue and Announcement of the Texas School for the Blind, 1922-1923. Austin: Von Boeckmann-Jones Co., p. 13.

[2] Twenty-Third Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1922. Topeka: B. P. Walker, 1922, p. 8.

Report of the Tennessee School for the Blind, Sessions 1927-1929, pp. 53; 55.

and other contrivances used in sewing, hand looms for weaving, equipment and material for basketry, pianos and tools for instruction in piano tuning, tools and supplies for chair caning, assorting tables, seeders, and assembling machines for broom making, a workroom fitted with the necessary tools and devices for sloyd, in the cases of the few schools where provision was made for the instruction of this kind of work, and appliances for teaching cooking either in a specially equipped kitchen or in the general school kitchen.[1]

Many of the schools appeared to be satisfactorily equipped to carry on the instructional activities of their various departments with the amount and kind of equipment varying in the different schools. There were schools, however, where the equipment was adequate but the lack of space hindered its

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[1] Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley: Department of Printing, California School for the Deaf, p. 10.

Twenty-Sixth Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1928. Topeka: B. P. Walker, State Printer, 1928, p. 21.

Tenth Biennial Report of the Superintendent of the North Dakota School for the Blind, To the Board of Administrators, For the Biennial Period Ending June 30, 1926, p. 725.

Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, p. 14.

Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin: Von Boeckmann-Jones Co., p. 20.

advantageous use. On the other hand, there was evidence that some of the schools needed more complete and modern equipment.[1] It was found in many schools that the living quarters of the students included the necessary furnishings appropriate to houses of the congregate and cottage types and also such equipment as: pianos, radios, victrolas, and similar provisions for the promotion of the social life of the students.[2]

Museums for the blind have been found in various stages of development in the residential schools for the blind ranging from a few specimens to extensive collections of

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1. Report of the Arkansas School for the Blind, 1929-1930, p. 37.

2. French, R. S. "The New Plant of the California School for the Blind." Outlook for the Blind, 25:146 (December, 1931).

   Report of the Board of Trustees of the Colorado School for the Deaf and Blind, For the Year Ending June 30, 1930. Colorado Springs: Printed at the School, 1930, p. 40.

   The Iowa School for the Blind, Vinton, Iowa, 1929-1930, p. [11].

   Twenty-Seventh Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1930. Topeka: B. P. Walker, State Printer, 1930, p. 8.

   Twenty-Seventh Biennial Report of the Oregon State School for the Blind for the Biennial Period Ending September 30, 1930, Ninth Biennial Report to the Oregon State Board of Control, Salem, Oregon, p. 174.

tangible objects.[1] Object teaching material is very important as it presents concrete ideas of things to blind children. Its importance has long been felt, but the progressive schools have not limited their tactual instruction to lifeless material encased in a museum; they have searched for animate objects which they have used as much as possible in their own natural setting.[2]

The museum at the Perkins Institution was found to include in addition to a large amount of tactual material the special reference library called the "blindiana" which contained books, periodicals, newspaper articles, etc. pertaining to all phases of blindness and the blind.[3] A

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1. Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley: Department of Printing, California School for the Deaf, p. 10.

   Biennial Report of the Louisiana State School for the Blind, June 30, 1930, Baton Rouge, Louisiana, p. 9.

   Thirty-Seventh Biennial Report of the Missouri School for the Blind to the Fifty-Sixth General Assembly, January 1, 1931, p. 16.

   Perkins Institution and Massachusetts School for the Blind, Ninety-Sixth Annual Report of the Trustees, 1927, Boston: Wright and Potter Printing Co., 1928, p. 48.

   Allen, E. E. "Museums for the Blind." Proceedings of the World Conference on Work for the Blind. New York: American Foundation for the Blind, 1932, pp. 197-200.

2. Ibid., p. 199.

3. Perkins Institution and Massachusetts School for the Blind, 1931, One Hundredth Annual Report of the Trustees, p. 22.

great deal of this material is of historical value and it represents the most extensive collection in the English language. Besides this vast array of literature, there were found here models of tangible apparatus showing the development of appliances used by the blind.[1]

There have been several other significant collections of literature dealing with the blind located at various centers throughout the United States, but the ones which have had the greatest reference value are to be found at the American Foundation for the Blind in New York City, the University of California in Berkeley, and the Pennsylvania Institution for the Instruction of the Blind in Overbrook.[2]

Since the embossed literature has presented a unique characteristic of schools for the blind, it is opportune to discuss the types of tangible reading and writing together with the materials and instruments employed that have been in use in these schools during the last decade. Two systems of embossing, New York Point and American Braille, vied with each other for supremacy in use for almost fifty years until

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[1] Allen, E. E. "Museums for the Blind." Proceedings of the World Conference on Work for the Blind. New York: American Foundation for the Blind, 1932, pp. 200-205.

[2] *Ibid*., pp. 201-202.

French, R. S. *op*. *cit*., pp. 255-256.

1918 when the "battle of points" was consummated and English or Revised Braille was adopted as the uniform system. The Braille system was introduced into the United States about the year 1860.[1] The New York Point system generally conceded to have been invented by William B. Wait came into use about 1870.[2] J. W. Smith made some desirable changes in Braille and this modified system became known as American Braille.[3] Many acrimonious discussions took place among the advocates of both systems and the very fact that two systems were in use, notwithstanding the merits of each, meant a duplication of material and an unwarrantable expense. A compromise was ultimately reached by means of the adoption of the Revised Braille system in 1918. Quoting from the Commission on Uniform Type for the Blind:

> The American Association of Instructors of the Blind, at its biennial convention in Colorado Springs, in June, 1918, unanimously adopted Revised Braille--Grade One and a Half, as the system authorized by it for use in the American schools. At the same time, the

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1. French, R. S. *op. cit.*, p. 158.

2. Twenty-First *Biennial Report* of the Wisconsin School for the Blind for the Biennial Period Ending June 30, 1924, Janesville, Being Part of the Biennial Report of the State Board of Control of Wisconsin, p. 243.

3. Perkins Institution and Massachusetts School for the Blind, Ninety-Third *Annual Report* of the Trustees, 1924. Boston: Wright and Potter Printing Co., 1925, p. 27.

> Association constituted the Commission on Uniform Type for the Blind a permanent board vested with final authority in matters pertaining to a uniform type for the blind, which action had been previously taken by the American Association of Workers for the Blind at its Portland convention, June, 1917.[1]

Another quotation from this Commission shows the action of the American Printing House for the Blind regarding the adoption of Revised Braille:

> At their annual meeting, July, 1918, the trustees of the American Printing House for the Blind decided to emboss all books hereafter in Revised Braille--Grade One and a Half, printing from New York Point and American Braille plates already embossed, only such texts as may, from time to time, be needed and called for by the various schools drawing their books from the Printing House, to keep their curricula going during the period of transition to Grade One and a Half.[2]

It took approximately ten years before the schools adopted the Revised Braille system in all the grades. At first the schools taught this system of Braille to the beginning classes and gradually introduced it into the first five or six grades, but did not attempt to require secondary school students to learn it immediately. As more and more of the younger students mastered Revised Braille, the complete substitution in time became possible with comparative ease.

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1. "Commission on Uniform Type for the Blind." _Outlook for the Blind_, 12:81 (Autumn Number, 1918).

2. _Ibid._, p. 79.

Typical statements describing the situation in the schools for the blind throughout the country between the years 1920 and 1927 are as follows:

> Most schools for the blind have adopted, either in part or throughout their entire course, the new system. Our school introduced the Revised Braille one grade at a time, beginning in 1920 with the lowest grade. Thus during the past year we have used it in grades one to three inclusive. In a few years our school will be on a Revised Braille basis.[1]
>
> The old system of American Braille is being discontinued as fast as new books in Revised Braille can be secured. At present Revised Braille is being used from the kindergarten to the sixth grade inclusive.[2]
>
> Almost all the schools for the blind in the United States and Europe have adopted a uniform system called the Revised Braille. We are putting this system in as rapidly as practical. Nearly all the work in the lower grades is in the Braille. In a few years the entire school will be using it....[3]
>
> Revised Braille, grade one and one-half, is used in the grades, and the New York Point is used in the High School. As financial means permit Revised Braille, which has been adopted as the universal system, will be placed in the high school.[4]

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1. Fifty-Fifth Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1922-1923. Albany: J. B. Lyon Co., Printers, 1924, p. 11.

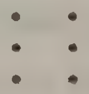
2. Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1924, Alamogordo, New Mexico, p. 17.

3. The Biennial Report of the Trustees of the Mississippi School for the Blind, From June 30, 1923 to July 1, 1925, p. 37.

4. Biennial Report of the Idaho State School for the Deaf and Blind, 1925-1926, Nineteenth and Twentieth Years, p. 11.

> Our whole student body is now familiar with Revised Braille, and by the opening of school in the fall, sufficient books will have been received in Revised Braille to enable us to make the use of this system general and uniform.[1]

Revised Braille is a system of six embossed dots from which sixty-three possible combinations can be made. In Grade One there are no contractions and each word is written out in full spelling. Grade One and a Half has forty-five part word and whole word signs. Grade Two is more highly contracted and Grade Three is composed of a very high percentage of contractions. The following illustration shows the position of the six dots. While the direction of reading is from left to right as in ink print, the direction of writing is from right to left. The pupils use for the most part a metal slate and stylus for writing, but the Hall Braille writer accomplishes the same result in a more facile and rapid manner. Parenthetically, this machine is more expensive, more cumbersome to transport, and noisier to use than the hand slate.



There is a complete musical notation in Braille so that

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[1] Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Thirty-Ninth *Annual Report*, 1926, p. 21.

all music may be transcribed.[1]

Braille books have been found to be expensive due chiefly to the heavy quality of paper required to emboss the dots and to the large quantity of paper necessarily used in each volume. These books have been so large in size and so many more volumes have been requisite to cover the material written in Braille than in ink print that the space devoted to the school libraries has had of necessity to be capacious. Every year there has been an increasing number of books available in Revised Braille. The fields of general literature, juvenile literature, history, geography, science, mathematics, philosophy, psychology, religion, foreign languages, especially French, German, Spanish, and Latin, poetry, drama, and vocations for the blind have been well represented in embossed type. The annual subsidy of $75,000 granted by the United States Government to furnish books to the various institutions for the blind on a per capita basis has determined largely the size of these libraries. However, contributions made by organizations and individuals have often made valuable additions to the libraries.

Table XIV shows the number of volumes and number of titles of embossed books contained in the school libraries in the years 1926 and 1931 respectively. It must be noted that the

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1. Perkins Institution and Massachusetts School for the Blind, Ninety-Eighth Annual Report to the Trustees, 1929. Boston: Wright and Potter Printing Co., 1930, pp. 41-42.

Table XIV. The Size of the School Libraries in the Years 1926 and 1931[1]

Names of Schools	1926		1931	
	No. of Vols.	No. of Titles	No. of Vols.	No. of Titles
Alabama School for the Blind	2657	360	1882	627
Arizona School for the Deaf and Blind	----	----	----	----
Arkansas School for the Blind	3000	500	3000	500
California School for the Blind	3000	1000	5430	988
Colorado School for the Deaf and Blind	2019	1032	3790	----
Connecticut School for the Blind	2000	----	1997	295
Florida School for the Deaf and Blind	500	----	700	247
Georgia Academy for the Blind	----	----	----	----
Idaho State School for the Deaf and Blind	1000	----	1500	----
Illinois School for the Blind	5200	1782	7000	2000
Indiana School for the Blind	3864	2008	4837	----
Iowa School for the Blind	5171	----	10000	----
Kansas School for the Blind	2401	1496	4962	3537
Kentucky School for the Blind	2015	----	----	----
Louisiana State School for the Blind	794	450	1000	475
Maryland School for the Blind	1500	185	----	----
Massachusetts School and Perkins Institution for the Blind	19970	2511	13517	2397
Michigan School for the Blind	9008	----	3000	----
Minnesota School for the Blind	----	----	11952	3952
Mississippi Institute for the Blind	----	----	----	----
Missouri School for the Blind	4760	569	4254	532
Montana School for the Deaf and Blind	326	----	836	----
Nebraska School for the Blind	5000	1900	5000	1900
New Mexico Institute for the Blind	1562	500	1500	500
New York Institute for the Education of the Blind	2800	----	7000	----
New York State School for the Blind	6590	----	6600	----
North Carolina School for the Blind	4080	----	1200	----
North Dakota School for the Blind	600	400	1200	500

Table XIV. The Size of the School Libraries in the Years 1926 and 1931, continued

Names of Schools	1926		1931	
	No. of Vols.	No. of Titles	No. of Vols.	No. of Titles
Ohio State School for the Blind	5421	673	1200	500
Oklahoma School for the Blind	4500	----	6000	815
Oregon State School for the Blind	1500	500	7000	3000
Pennsylvania Institution for the Instruction of the Blind	----	----	15727	1939
South Carolina School for the Deaf and Blind	1000	400	1500	600
South Dakota School for the Blind	1313	----	1000	----
Tennessee School for the Blind	6000	----	7750	2000
Texas School for the Blind	11531	----	6000	600
Utah School for the Blind	2000	----	2048	1137
Virginia School for the Deaf and Blind	1800	----	3000	----
Washington School for the Blind	1200	165	----	650
Western Pennsylvania School for the Blind	4500	1780	4500	1780
West Virginia State Schools for the Deaf and Blind	2000	----	3000	----
Wisconsin School for the Blind	6285	519	1500	----
42 Total	145387	20020	163182	31296

1. The data in Table XIV were obtained from the *Directory of Activities for the Blind in the United States and Canada* published in 1926 and the *Directory of Activities for the Blind in the United States and Canada* published in 1932 by the American Foundation for the Blind.

number of volumes greatly exceeded the number of titles as the number of volumes varied largely according to the title, since one title may have included many volumes.

In 1926 there were two school libraries with more than 10,000 volumes; namely, Perkins Institution with 19,970 volumes and the Texas School for the Blind with 11,531 volumes; and there was only one school library with less than 500 volumes; namely, the Montana School for the Deaf and Blind with 326 volumes. The median number of volumes in the thirty-eight school libraries reporting in 1926 was 2733. In 1931 there were three school libraries with more than 10,000 volumes; namely, the Pennsylvania Institution for the Instruction of the Blind with 15,727 volumes, Perkins Institution with 13,517 volumes, and the Minnesota School for the Blind with 11,952 volumes; and no school had less than 500 volumes. The Florida School for the Deaf and the Blind had the smallest number of volumes which was 700 volumes. The median number of volumes in the thirty-six school libraries reporting in 1931 was 3395. The total number of volumes in the school libraries in 1926 was 145,387 and in 1931 was 163,182. The total number of titles in the school libraries in 1926 was 20,020 and in 1931 was 31,296.

No significant comparisons can be made between the total number of volumes for the two years since in 1926 thirty-eight schools reported and in 1931 thirty-six schools reported the

total number of volumes in their libraries and furthermore there is a discrepancy inasmuch as three of the schools that reported in 1926 did not report in 1931 and contrariwise, one school reported in 1931 that did not report in 1926.

Wherever the total number of volumes given for a school in 1926 was larger than in 1931, the cause has been probably due to the fact that the number of volumes reported in 1926 included all embossed books, while in 1931 only Revised Braille books were reported.

Each library has been found to have subscribed to a number of magazines embossed for the consumption of the blind. The outstanding periodicals that have been of particular interest to the high school students included: Matilda Ziegler Magazine, Weekly News, American Review, International Braille, Readers' Digest, Musical Review, March of Events, and Correo Braille Hispano-Americano.

There have been a number of State and city libraries that have contained departments which have furnished Braille books on request.[1] These books have been made accessible to blind persons by means of the generosity of the United States postal system which has allowed free transportation of Braille books to all blind readers.

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[1] Irwin, Robert B. "Blind People in Library Work for the Blind." Outlook for the Blind, 26:30 (March, 1932).

The opportunities afforded to blind readers for obtaining embossed material have been continually increasing, not only with respect to the number of books, but to the greater variety of books. Glancing over the catalogues issued by the American Printing House for the Blind for the last ten years, the practice that has been followed of putting into Revised Braille each year a larger number of the more recent books is particularly noticeable. It must be said with emphasis that the educational development of the blind has been greatly stimulated and facilitated by means of embossed systems of reading and writing and the adoption of a uniform system has been a decidedly forward step.

II. Internal Organization

Having considered the external organization of residential schools for the blind relative to support and control and physical plant, the investigation turned to a survey of the conditions existing as to various features of the internal organization of these institutions. The data concerning the teaching force, student population, time distribution, and grade and class distribution have been obtained almost exclusively through survey sheets sent to the forty-two residential schools for the blind. Every teacher in the high school department of each of these schools was canvassed for

the information that is presented under the section Teaching Force. The data included in the other three sections were furnished by the superintendents of the schools supplemented by data from the Office of Education, Washington, D. C. and the school catalogues.

1. Teaching Force

a. Size and Statue

Table XV presents the number and percentage of men and women teachers, sighted and blind, who taught in the literary, music, physical education, and industrial departments in eighteen secondary schools for the blind in 1921.

It will be noticed in Table XV that more than half or fifty-four per cent of the teachers in the high school were sighted women, while twenty-four per cent were sighted men. Sixteen per cent of the teachers were blind men and only six per cent were blind women. Seventy-eight per cent of the teachers had vision, and twenty-two per cent of the teachers were either totally or partially blind.

The largest number of teachers employed in the high school belonged to the literary department; namely, sixty-six. The industrial department had the next largest enrollment of teachers; namely, fifty-eight, which slightly exceeded the music department with fifty-two teachers. The physical education department employed only twenty-two teachers.

Table XV. The Number and Percentage of Teachers in the Four Departments in Eighteen Secondary Schools for the Blind in 1921

Department	Men				Women					
	Sighted		Blind		Sighted		Blind		Total	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
Literary	18	27.0	3	4.5	40	61.0	5	7.5	66	100.0
Music	10	19.0	5	10.0	31	60.0	6	11.0	52	100.0
Physical Education	9	41.0	2	9.0	11	50.0	0	0.0	22	100.0
Industrial	11	19.0	22	38.0	24	41.0	1	2.0	58	100.0
Total Number	48	24.0	32	16.0	106	54.0	12	6.0	198	100.0

Table XVI. The Number and Percentage of Teachers in the Four Departments in Twenty-One Secondary Schools for the Blind in 1931

Literary	25	27.0	4	4.0	56	60.0	8	9.0	93	100.0
Music	14	18.2	11	14.3	38	49.3	14	18.2	77	100.0
Physical Education	13	37.0	3	9.0	18	51.0	1	3.0	35	100.0
Industrial	11	13.0	35	43.0	32	39.0	4	5.0	82	100.0
Total Number	63	23.0	53	18.0	144	50.0	27	9.0	287	100.0

In every department the sighted women teachers predominated. In each department, except the industrial department, more sighted than blind men were employed. In the literary department only blind women instructors surpassed in numbers blind men instructors.

Table XVI presents the number and percentage of men and women teachers, sighted and blind, who taught in the literary, music, physical education, and industrial departments in twenty-one secondary schools for the blind in 1931.

According to the data in Table XVI fifty per cent of the teachers in the high school in 1931 were sighted women, and twenty-three per cent were sighted men. Eighteen per cent of the teachers were blind men and half that number, or nine per cent, were blind women. Seventy-three per cent of the teachers had vision, and twenty-seven per cent of the teachers were either totally or partially blind.

The largest number of teachers employed in the high school belonged to the literary department; namely, ninety-three. The industrial department was second in respect to enrollment with eighty-two teachers; the music department had seventy-seven teachers; and the physical education department had thirty-five teachers.

In each department the sighted women teachers predominated. In each department, except in the industrial department, more sighted men than blind men were employed. In the literary and music departments blind women instructors surpassed in

numbers blind men instructors.

Since the number of schools included in Table XVI was somewhat larger than that of Table XV any comparisons made are subject to some discrepancy. The predominance of sighted women instructors was marked for both years, 1921 and 1931. The percentage of sighted men instructors was practically the same for both years. There was a slight increase in percentage of blind instructors in 1931. As a whole, similarity rather than difference in data is to be found in the two tables.

b. Training

Table XVII indicates the number and percentage of teachers in secondary schools for the blind who have graduated from higher institutions of learning. In case of graduation from more than one institution, the most advanced one only is named. This table was compiled from 101 responses to questionnaires sent out in the spring of 1932 to all the secondary teachers in forty of the residential schools for the blind. These 101 teachers represented sixteen schools.

Two of the teachers did not graduate from high school, and one teacher did not designate her preparation, which facts account for the total ninety-eight in the place of the 101 teachers in Table XVII.

Table XVII. The Number and Per Cent of Secondary Teachers and the Institutions from Which They Have Graduated

Institution	Number of Teachers	Per Cent of Teachers
High School	21	21.43
Normal School	15	15.31
Junior College	2	2.05
Teachers' College	10	10.21
Four-Year College	18	18.37
University	32	32.63
Total	98	100.00

Table XVII shows that approximately one-third of the teachers have graduated from universities, while slightly more than one-fifth of them have not graduated from any institution of learning more advanced than the high school.

Fifteen teachers reported that they had done graduate university work, the number of years ranging from six months to five years, the median number of years being one year. Two teachers each reported one year of graduate work at four-year colleges. Three teachers reported two years, two years, and one year respectively of graduate work at normal schools.

If the data compiled from the responses of the 101 teachers given above are a fair sampling of the preparation of all the secondary teachers in schools for the blind, it

must be concluded that the preparation was decidedly meagre for a large number of the instructors. According to Table XVII thirty-eight per cent of the teachers have had no academic training beyond the high school, normal school, and junior college. It has not been possible to estimate specifically the effect but this situation could not but help to have influenced the standard of instruction in these institutions.

c. Degrees

Table XVIII shows the number and percentage of teachers who held bachelor's, master's, and doctor's degrees and likewise the number and percentage of teachers who held no degrees. In the case of those teachers who held more than one degree, only the highest degree has been recognized. The data in this table represent replies from questionnaires received from 101 teachers of junior and senior high school subjects in sixteen schools for the blind.

Table XVIII. Highest Degrees Held by 101 Teachers in Sixteen Secondary Schools for the Blind in 1931

Degree	Number of Teachers	Per Cent of Teachers
Bachelor	42	41.6
Master	11	10.9
Doctor	1	1.0
No Degree	47	46.5
Total	101	100.0

The largest percentage of teachers according to Table XVIII held no degree at all. Slightly more than forty per cent and ten per cent held bachelor's and master's degrees respectively, while only one teacher was found to hold a doctor's degree.

Of the forty-two teachers who had bachelor's degrees, thirty-one belonged to the literary department, five to the music department, four to the industrial department, and two to the commercial department. Of the eleven teachers with master's degrees nine taught literary subjects, one taught physical education, and one taught a combination of literary and industrial subjects. The one teacher who had a doctor's degree taught in the literary department. Of the forty-seven teachers who held no degrees, seventeen taught in the literary department, ten taught in the music department, thirteen taught in the industrial department, and one taught commercial subjects.

Most of the teachers in the literary department held either a master's or bachelor's degree, while the major number of teachers in the music, physical education, and industrial departments held no degrees. In these last three mentioned departments undoubtedly in some cases specialized training had been received at institutions which did not grant degrees and so the training may have been equivalent to that required for a degree.

d. Credentials

From answers to questionnaires received from 101 teachers giving instruction in the secondary departments of sixteen residential schools for the blind in 1931, it was found that sixty-one teachers held regular certificates; twenty-four held special certificates; five held no certificates; and eleven failed to designate the type of certificate held. Eighty of these teachers held certificates which entitled them to teach in senior high school and twenty-nine of these eighty teachers were also entitled to teach in junior college. Ten of the 101 teachers held certificates which did not entitle them to teach in grades above the junior high school, and four of them held certificates which did not entitle them to teach in grades above the elementary grades. The apparent discrepancy in this last item may be explained by the fact that these four teachers gave instruction to a few individual high school students or taught just one high school subject in combination with elementary subjects. The teachers who were entitled to teach in the senior high school invariably were qualified by their certificates to teach junior high school and elementary classes. Seven teachers failed to indicate the types of schools in which their certificates entitled them to teach.

If the teachers in the sixteen schools who indicated the type of certificate held by them were representative

in this respect of all the teachers in junior and senior high schools in the other schools for the blind, it can be said that it was an exceptional case where a teacher did not have a certificate which qualified him or her for teaching in those departments.

e. Teaching Experience

Table XIX shows the number of years of senior high school teaching that eighty-one instructors in sixteen secondary schools for the blind had completed in the year 1931. These data were the result of answers to survey sheets returned by eighty-one teachers.

Table XIX reveals that the range of experience in senior high school teaching for the eighty-one teachers in the sixteen secondary schools for the blind in 1931 was from one-half of one year to forty-one years. The median number of years that these teachers taught in senior high schools was eight. Eight per cent of these teachers had not more than one year of experience in high school teaching, and eight per cent had more than twenty-five years of experience in high school teaching.

The survey sheets returned by 101 secondary teachers in sixteen schools for the blind showed that approximately five per cent of them had had previous kindergarten experience; fifty-one per cent of them had had teaching

Table XIX. The Years of Senior High School Teaching Completed by Eighty-One Teachers in Sixteen Secondary Schools for the Blind in 1931

Years of Experience	Number of Teachers	Years of Experience	Number of Teachers
½	2	16	0
1	5	17	1
2	7	18	1
3	2	19	1
4	9	20	2
5	2	21	1
6	5	22	1
7	2	23	1
8	8	24	0
9	6	25	1
10	2	26	1
11	2	28	1
12	2	35	2
13	5	36	1
14	2	40	1
15	4	41	1
		Total	81

experience in the elementary grades; thirty-nine per cent had had junior high school teaching experience; two per cent had had junior college teaching experience; three per cent had had teaching experience in four-year colleges; and eight per cent had taught in universities.

Table XX shows the number of years that 101 teachers of the secondary department in sixteen residential schools for the blind had taught in the respective schools in which they were teaching in 1931.

Table XX. The Number of Years That 101 Teachers in Sixteen Secondary Schools for the Blind Have Taught in Their Respective Schools

Number of Years	Number of Teachers	Number of Years	Number of Teachers
½	3	15	2
1	13	19	1
2	13	20	2
3	7	21	3
4	11	22	1
5	5	24	2
6	3	26	1
7	3	32	1
8	7	35	1
9	5	36	1
10	3	40	1
11	1	41	1
12	3	44	1
13	6		
		Total	101

In Table XX it is seen that the range of years that these teachers have taught in their respective schools varied from one-half of a year to forty-four years. The median number of years that these teachers have taught in these schools was five.

Ten of these 101 teachers have taught in other schools for the blind. Table XXI shows the extent of teaching done by these ten teachers in schools for the blind other than the schools in which they were teaching in 1931.

Table XXI. The Number of Years That Ten Teachers Have Taught in Other Secondary Schools for the Blind

Number of Years	Number of Teachers
1	1
2	3
3	1
4	1
5	1
10	2
12	1
Total	10

Table XXI reveals that ten teachers have taught in other schools for the blind from one to twelve years with a median of three and one-half years.

It would seem from the data presented that the faculty in secondary schools for the blind was fairly constant. As a whole, these teachers have had little experience in teaching above the senior high school. Fifty-six per cent of them have had experience in teaching in grades below the junior high school, and only thirteen per cent of them have had any teaching experience above the senior high school.

f. Professional Advancement

(1) Teachers' Meetings. Twenty-three superintendents

among the forty-two superintendents in secondary schools for the blind who were asked how often faculty meetings were held in their schools sent in the replies that have been tabulated in Table XXII.

Table XXII. The Frequency of Teachers' Meetings Reported by Twenty-Three Secondary Schools for the Blind in 1931

Meetings	Number of Schools
Weekly	2
Monthly	11
Six Weeks	1
On Call	9
Total	23

Table XXII shows that most of the twenty-three schools reporting held regular monthly meetings or meetings on call. No study was found that revealed the practice in this regard among public secondary schools. Koos made a study of high school teachers' preferences concerning the frequency of teachers' meetings and he discovered that they preferred monthly or bimonthly meetings.[1] There were no data which indicated that their preferences were respected, however.

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[1] Koos, Leonard B. "High School Teachers' Meetings." *American School Board Journal*, 69:35 (October, 1924).

If it had been possible to ascertain the nature of the teachers' meetings in schools for the blind, these data would have thrown considerable light on the policies and practices of the schools. The tendency in public schools to-day is described by Homer Martin in the following words:

> The old type of faculty meeting, which is called regularly and must endure for the prescribed two hours, whether there is work to do or not, is fortunately passing. Most of the problems formerly handled in such meetings are now better attended to by small committees or by a principal's advisory council elected by the faculty.
>
> The main object of the newer type of faculty meetings is to stimulate the professional growth of teachers and principal. A large part of each meeting should be devoted to this purpose, or better yet, entire meetings can be regularly scheduled as "professional faculty meetings."[1]

(2) Attendance at Summer School. Table XXIII was compiled from the responses to questionnaires by 101 teachers in sixteen secondary schools for the blind in regard to the number of summer school sessions they had attended previous to 1932. The number of summer school sessions was divided, for convenience, into three groups using five as the range of the class-interval.

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1. Martin, Homer "Professional Faculty Meetings." California Quarterly of Secondary Education, 4:346 (1928-1929).

Table XXIII. The Number of Summer School Sessions Attended by Thirty-Six Teachers in Secondary Schools for the Blind

Number of Summer School Sessions	Number of Teachers
1- 5	18
6-10	9
11-15	9
Total	36

Thirty-six teachers reported that they had attended from one to fifteen summer school sessions. Half of the thirty-six teachers attended one to five summer school sessions, while the remaining half were equally divided, one-half attending six to ten summer school sessions and one-half attending eleven to fifteen summer school sessions.

(3) Extension Courses. Table XXIV shows the number of extension courses taken by the teachers in sixteen secondary schools for the blind previous to 1932. These data were obtained from questionnaires sent to the high school teachers in the forty-two residential schools for the blind. The number of extension courses was divided, for convenience, into three groups using five as the range of the class-interval.

Table XXIV. The Number of Extension Courses Taken by Twelve Teachers in Secondary Schools for the Blind

Number of Extension Courses	Number of Teachers
1- 5	10
6-10	1
11-15	1
Total	12

Twelve teachers reported that they had taken from one to fifteen extension courses. Ten of them had taken from one to five extension courses, while only one had taken six to ten extension courses and only one had taken eleven to fifteen extension courses.

In addition to the thirty-six teachers who reported having attended summer school sessions and the twelve teachers who had taken extension courses, eighteen teachers reported having taken both summer school work and extension courses. Five of them attended one to five sessions of summer school and had taken from one to five extension courses. One teacher attended six to ten summer school sessions and had taken from six to ten extension courses. Three teachers attended one to five sessions of summer school and had taken six to ten extension courses. Five teachers

attended six to ten summer school sessions and had taken from one to five extension courses. Two teachers attended eleven to fifteen summer school sessions and had taken from one to five extension courses. One teacher attended eleven to fifteen summer school sessions and had taken from six to ten extension courses. One teacher attended six to ten summer school sessions and had taken eleven to fifteen extension courses.

Sixty-six or about two-thirds of the teachers in sixteen secondary schools for the blind have manifested an interest in professional advancement by means of attending summer school sessions or by taking extension courses or both. Thirty-five or approximately one-third of the teachers in these sixteen schools have never taken either work in summer school or extension courses.

The teachers in these sixteen schools have shown a progressive spirit and a desire to improve professionally. The attendance at summer school sessions particularly has given evidence that teachers in secondary schools for the blind have not been behind the teachers in the public secondary schools in this respect. Foster stated the situation in the country at large in these words:

> ....One of the most notable features of the present-day university is the summer session, and it has been estimated that every year one-fifth of the teachers of the United States are in attendance at summer

schools....[1]

(4) Travel. Estimating on a basis of 101 teachers in sixteen secondary schools for the blind who responded to the questionnaires, it has been found that thirty-three of them representing eleven schools have traveled in foreign countries; in five of the sixteen schools no teacher of the junior or senior high school had traveled in a foreign country.

The following figures denote the number of teachers and the number of countries in which they have traveled: one teacher, ten countries; one teacher, eight countries; one teacher, six countries; two teachers, five countries; one teacher, four countries; four teachers, three countries; three teachers, two countries; twenty teachers, one country. Canada was the country visited most frequently by these teachers; it was named in twenty-five cases.

The figures do not indicate extensive travel among the teachers in the secondary department of schools for the blind as a whole, although it must be admitted that these figures were derived from questionnaires answered by the teachers of only sixteen schools; however, these schools were scattered throughout the United States quite generally.

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[1] Foster, Herbert H. High School Administration. New York: The Century Co., 1928, p. 111.

No attempt was made to discover the extent of travel on the part of these teachers in this country.

(5) Professional Courses. If schools for the blind aim to be progressive, they must encourage their teachers to improve professionally. They must provide means for this improvement. Many educators have felt that the teachers in these special schools have not been sufficiently informed and trained concerning the special problems and principles involved in giving instruction to the blind. An initial step to make possible special training for teachers of the blind was taken by Superintendent Wampler of the Tennessee School for the Blind. Under his direction an intensive course of six weeks was given in 1921 during the summer session at the George Peabody College for Teachers in Nashville.[1] Two experienced teachers were in charge of the lectures, reading, and examinations dealing with the education of the blind. Twenty teachers from five schools for the blind availed themselves of this opportunity.[2]

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[1] Van Cleve, E. M. "Efforts toward a Pedagogy of the Blind." Outlook for the Blind, 16:8 (Spring Number, 1922).

Wampler, I. S. "Training Teachers for Service." American Association of Instructors of the Blind. Proceedings of the Twenty-Seventh Biennial Convention Held at Watertown, Massachusetts, June 23-27, 1924, pp. 223-225.

[2] Allen, E. E. "Notes on the Preparation of Teachers of the Blind." Outlook for the Blind, 16:19 (Spring Number, 1922).

Since 1921 these courses have been continued at intervals down to the present time.

The next step was the Harvard Course designed to train especially prospective teachers of the blind, although experienced teachers have found the course profitable. The Graduate School of Education of Harvard University gave its first course on the education of the blind in the fall and winter of 1921 at the instigation of Dr. E. E. Allen. This first course was so successful that it has been succeeded by similar ones which have expanded in curricular content and have steadily grown in popularity. Lectures, visits and demonstrations, reading, observation, practice teaching, and examinations have been carried on jointly by the university and Perkins Institution.[1]

This course of six months' duration has been followed optionally by the second course covering a similar period.[2] Students have attended these courses from many States of the Union as well as from foreign countries.[3] Dr. Allen's

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1. Allen, E. E. "Notes on the Preparation of Teachers of the Blind." _Outlook for the Blind_, 16:19-20 (Spring Number, 1922).

2. Caraway, Mary M. R. "Rapporteurs' Reports." _Proceedings of the World Conference on Work for the Blind._ New York: American Foundation for the Blind, 1932, p. 402.

3. Allen, E. E. "New Vocational Studies at Perkins." American Association of Workers for the Blind. _Proceedings_ of the Thirteenth Biennial Convention Held at Lake Wawasee, Indiana, 1929, pp. 49-50.

plan of having students participate in actual classroom work under supervision at Perkins Institution after taking the prescribed courses has made for practical results based on a background of principles and theories.

In 1931 the Illinois School for the Blind held a three weeks' summer school for the teachers of that institution. This serves as an additional example of the need that has been recognized that teachers of the blind should have opportunities for the study of the special problems connected with their work.[1]

The following resolutions have been passed by the American Association of Instructors of the Blind and the American Association of Workers for the Blind which signify that these agencies recognized the need of maintaining a professional standard in regard to the instruction of the blind.

> Whereas, the American Association of Instructors of the Blind and the American Association of Workers for the Blind, hold that the instruction of the blind has become a profession and that it should remain a profession; that there has been accumulated by long experience, by scientific research, by psychological analysis a body of information which is invaluable in the proper and effective education of the blind; that the direction and instruction of the blind should be in the hands of those who are practical, trained educators, and who are thoroughly informed in the special educational principles as applied to the blind; that both

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[1] Woolston, Incia O. "Summer School at Illinois School." Outlook for the Blind, 25:104-105 (September, 1931).

> the welfare of society and the interests of the blind themselves demand the above named advantages in the education of the blind; that for those in authority to ignore the above principles is to move backward and to fall from the high ideals and practices that have hitherto prevailed, therefore be it
>
> Resolved, that boards of trestees when appointing heads of schools and institutions for the education of the blind, should recognize the importance of these principles, and should place in charge of such schools and institutions only professional educators, and, when possible, those who are trained and experienced in the special work of educating the blind, and be it further
>
> Resolved, that failure to live up to such principles on the part of boards of trustees in the appointment of heads of schools and institutions for the blind is to fail seriously in the performance of their higher duties and to place other interests before the welfare of the blind themselves and the welfare of society.[1]

It may be concluded that successful teaching of blind children demands a special type of training for the teachers in addition to a thorough fundamental training in general educational principles and practices. Moreover, this special training must not cease after these teachers have taken a course or two, for education must mean to teachers a continuous process in order that they may keep abreast of the times, educationally speaking.

g. Resident Teachers

An attempt was made to discover how many teachers of

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[1] "Resolutions: Instruction of the Blind--a Profession." American Association of Workers for the Blind. Proceedings of the Fourteenth Biennial Convention Held at New York City, 1931, p. 78.

the secondary department in the residential schools for the blind resided at the schools in the years 1921 and 1931. Table XXV shows the total number of teachers in the secondary department in eighteen schools for the blind and the number of these teachers who resided at the schools in 1921. The data for this table were furnished by the superintendents of the respective schools by means of questionnaires.

By Table XXV it is seen that 106 teachers out of a total number of 200 or slightly more than fifty per cent of them resided at the schools in which they were giving instruction in 1921. In the case of three schools it will be noticed that all the teachers in the high school department maintained residence at the school, and in the case of three other schools no teacher in the high school lived at the school in 1921.

Table XXVI shows the total number of teachers in the secondary department in twenty-two schools for the blind and the number of these teachers who resided at the schools in 1931.

Table XXVI reveals that 153 teachers out of a total number of 292, or slightly more than fifty per cent of them, resided at the schools in which they were teaching in 1931. In the case of one school it will be noted that all the teachers in the high school department were living at the school, and in the case of two schools no teacher in the

Table XXV. The Total Number of Teachers Who Taught in Eighteen Secondary Schools for the Blind and the Number of these Teachers Who Resided at the Schools in 1921

School	Total Number of Teachers	Number of Resident Teachers
California School for the Blind	11	3
Connecticut School for the Blind	3	3
Idaho State School for the Deaf and Blind	9	0
Indiana School for the Blind	13	2
Kansas State School for the Blind	12	10
Louisiana State School for the Blind	7	5
Minnesota School for the Blind	19	11
Missouri School for the Blind	9	7
New Mexico School for the Blind	6	6
New York State School for the Blind	13	9
North Dakota School for the Blind	10	2
Oklahoma School for the Blind	11	5
Perkins Institution and Massachusetts School for the Blind	25	20
Tennessee School for the Blind	16	9
Virginia School for the Deaf and the Blind	7	0
Western Pennsylvania School for the Blind	9	9
West Virginia State Schools for the Deaf and Blind	9	4
Wisconsin School for the Blind	11	0
18 Total	200	106

Table XXVI. The Total Number of Teachers Who Taught in Twenty-Two Secondary Schools for the Blind and the Number of these Teachers Who Resided at the Schools in 1931

School	Total Number of Teachers	Number of Resident Teachers
California School for the Blind	12	1
Connecticut School for the Blind	5	4
Idaho State School for the Deaf and Blind	10	0
Illinois School for the Blind	19	0
Indiana School for the Blind	13	4
Kansas State School for the Blind	18	14
Kentucky School for the Blind	9	3
Louisiana State School for the Blind	9	7
Minnesota School for the Blind	21	13
Missouri School for the Blind	12	6
New Mexico School for the Blind	8	7
New York State School for the Blind	13	9
North Dakota School for the Blind	13	2
Oklahoma School for the Blind	15	6
Oregon State School for the Blind	5	3
Perkins Institution and Massachusetts School for the Blind	26	19
South Carolina School for the Deaf and Blind	5	5
Tennessee School for the Blind	17	14
Virginia School for the Deaf and the Blind	16	5
Western Pennsylvania School for the Blind	13	10
West Virginia State Schools for the Deaf and Blind	16	9
Wisconsin School for the Blind	17	12
22 Total	292	153

high school department was living at the school in 1931.

Comparing Tables XXV and XXVI it is found that in both 1921 and 1931 slightly more than half of the teachers were residing at their respective schools.

It is a controversial question whether it is a wise procedure to either demand or allow teachers to reside at the schools. It is an advantage to the students to feel the influence of the teachers beyond the hours devoted to classroom work, but the additional hours that teachers spend in the environment of institutional life are apt to militate against their vigor and freshness of outlook that a change of environment often supplies.

h. Salaries

The data that were obtained from the superintendents concerning teachers' salaries in secondary schools for the blind were too meagre to be of service. A further complication that rendered the data of no comparative value was that some salaries were reported as annual cash salaries, others as monthly cash salaries, and still others as annual salaries including maintenance. Frequently in the case of the latter no estimation was given of the amount of salary in cash and that of maintenance.

There is evidence that the teachers in at least some of

the secondary schools for the blind have not received a compensation equivalent to public school teachers. For example, the following quotation stated the situation in the Western Pennsylvania School for the Blind.

> The excellence of our location, in the educational center of Pittsburgh, however makes it inevitable that our teachers should realize the discrepancy between our salary schedule and that of the public schools surrounding us. This is partially offset, however, by many advantages which this location offers. We are gradually overcoming this salary difference, and I hope the time will come when we shall be able to meet that keen salary competition which has led several of our specialized teachers to leave our work and avail themselves of greater opportunities of a financial nature in public schools.[1]

Pertinent to this problem is the subsequent quotation concerning the situation in the Alabama School for the Blind:

> As to teachers' salaries we are in competition with the rich states of the Union and find that in many places school officials are paying as much salary as we do and are giving sustenance in addition. No matter how much we deplore this condition, we can't get away from the fact that other schools are getting the best teachers.[2]

A third example is quoted from the report of the Missouri School for the Blind dated January 1, 1931.

> The increase in our salary appropriation is a moderate increase in salaries for our

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1. Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-Second Annual Report, 1929, p. 18

2. Sixty-Ninth Annual Report of the Superintendent of Institute for Deaf and Blind, 1929-1930, Talladega, Alabama, p. 17.

> teachers whose remuneration does not yet equal that of teachers in the public schools for normal children. Specially trained teachers for handicapped children should be paid more than teachers for normal children.[1]

No generalized conclusions can be drawn from these isolated examples, but they do serve to focus attention on a condition that should not exist in any school for the blind if the best results in instruction are a desideratum.

According to the evidence at hand it appears that a considerable number of secondary teachers in residential schools for the blind have tried to advance professionally by attending summer school sessions and by taking extension courses, but in the matter of foreign travel they have shown less interest. In order to stimulate professional improvement among the teachers of visually handicapped children, the Perkins Institution, the Tennessee School for the Blind, and the Illinois School for the Blind have provided special courses. The policy of teachers residing at their respective schools was found to be in effect in the case of approximately fifty per cent of the secondary teachers. The data were incomplete concerning teachers' salaries, but there were indications in several instances that the salaries of teachers in residential schools for the blind were not equal to those

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[1] Thirty-Seventh Biennial Report of the Missouri School for the Blind to the Fifty-Sixth General Assembly, January 1, 1931, p. 6.

paid to public school teachers.

2. Student Population

a. Distribution of Enrollment

The Office of Education in Washington, D. C. has compiled the most complete statistics regarding enrollments in residential schools for the blind for the years under consideration that have been available. The data in Tables XXVII, XXIX, and XXXI were obtained from this source with the exception of several figures whose sources have been indicated.

A comparison of the total student enrollments and enrollments in classes corresponding to high school grades in Tables XXVII, XXIX, and XXXI reveals a steadily increasing population in the forty-two residential schools for the blind. The data are less complete for the year 1921-1922 than for the other two years, which fact in comparing must be taken into account. There were no reliable means for discovering whether or not these increasing enrollments were due to an increase in blindness among children throughout the country. The supposition is that the larger enrollments were due in large measure to more effectively enforced compulsory education laws respecting blind boys and girls and

Table XXVII. Student Enrollment in Schools for the Blind 1921-1922[1]

School	Total Enroll-ment	Enrollment in Classes Corresponding to High School Grades
Alabama School for the Blind	no data	no data
Arizona School for the Deaf and Blind	2	0
Arkansas School for the Blind	100	19
California School for the Blind	95	23
Colorado School for the Deaf and Blind	68	6
Connecticut Institute for the Blind	60	11
Florida School for the Deaf and Blind[2]	53	0
Georgia Academy for the Blind	106	13
Idaho State School for the Deaf and Blind	20	2
Illinois School for the Blind	no data	no data
Indiana School for the Blind	163	23
Iowa School for the Blind	114	33
Kansas State School for the Blind	99	12
Kentucky School for the Blind	102	34
Louisiana State School for the Blind	71	7
Maryland School for the Blind	106	21
Perkins Institution and Massachusetts School for the Blind	298	74
Michigan School for the Blind	162	23
Minnesota School for the Blind	89	26
Mississippi School for the Blind	81	16
Missouri School for the Blind	no data	no data
Montana State School for the Deaf and the Blind	20	0
Nebraska School for the Blind	62	5
New Mexico School for the Blind	78	10
New York Institute for the Education of the Blind	126	32
New York State School for the Blind	184	39

School	Total Enrollment	Enrollment in Classes Corresponding to High School Grades
North Carolina School for the Deaf and the Blind[3]	198	29
North Dakota School for the Blind	35	5
Ohio State School for the Blind	265	60
Oklahoma School for the Blind	129	29
Oregon State School for the Blind	47	6
Pennsylvania Institution for the Instruction of the Blind	251	85
South Carolina School for the Deaf and Blind	60	9
South Dakota School for the Blind	30	15
Tennessee School for the Blind[3]	189	46
Texas School for the Blind	247	40
Utah School for the Deaf and Blind	34	12
Virginia School for the Deaf and Blind	74	7
Washington State School for the Blind	59	18
Western Pennsylvania School for the Blind	161	17
West Virginia State Schools for the Deaf and Blind[4]	78	4
Wisconsin School for the Blind	122	24
42 Total	4238	835

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1. Table 5. "Schools and Classes for the Blind, 1921-22," Bulletin, 1923, No. 51, Bureau of Education. Washington: Government Printing Office, 1923, pp. 8-10.

2. School not graded.

3. Includes both white and colored schools.

4. Estimated from 1917-18 data.

an extension of education informing parents and guardians concerning the opportunities offered by schools for the blind.

According to Table XXVII Perkins Institution and Massachusetts School for the Blind had the largest total student enrollment in 1921-1922, which was 298 students. For the same year the Pennsylvania Institution for the Instruction of the Blind had the largest enrollment in classes corresponding to the high school grades; namely, eighty-five students. The smallest enrollment was found in the Arizona School for the Deaf and Blind, consisting of two blind students.

Table XXVIII shows the distribution of enrollment in classes corresponding to the high school grades in schools for the blind in 1921-1922. The data in this table have been compiled from thirty-six schools. In grouping five was used as the range of the class-interval.

Table XXVIII. Distribution of Enrollment in Classes Corresponding to the High School Grades in Schools for the Blind in 1921-1922

Class-Interval	Number of Schools
85-89	1
80-84	
75-79	
70-74	1
65-69	
60-64	1
55-59	
50-54	
45-49	1

Class-Interval	Number of Schools
40-44	1
35-39	1
30-34	3
25-29	3
20-24	5
15-19	5
10-14	5
5- 9	7
0- 4	2
Total	36

Table XXVIII reveals that the largest number of schools; namely, seven schools in 1921-1922 had enrollments in their classes corresponding to the high school grades of five to nine students. Six schools had enrollments in these classes of thirty-five to thirty-nine students, forty to forty-four students, forty-five to forty-nine students, sixty to sixty-four students, seventy to seventy-four students, and eighty-five to eighty-nine students respectively. The smallest enrollments of one to four students were found in two schools, and the largest enrollment of eighty-five to eighty-nine was found in one school.

For the year 1926-1927 Table XXIX reveals that Perkins Institution and Massachusetts School for the Blind headed the list of total enrollments and enrollments in classes

Table XXIX. Student Enrollment in Schools for the Blind 1926-1927[1]

School	Total Enrollment	Enrollment in Classes Corresponding to High School Grades
Alabama School for the Blind	119	24
Arizona School for the Deaf and Blind[2]	8	no data
Arkansas School for the Blind	126	15
California School for the Blind	108	36
Colorado School for the Deaf and Blind	71	14
Connecticut Institute for the Blind	66	20
Florida School for the Deaf and Blind	58	4
Georgia Academy for the Blind[3]	106	13
Idaho State School for the Deaf and Blind	21	4
Illinois School for the Blind	235	60
Indiana School for the Blind	147	24
Iowa School for the Blind	114	33
Kansas State School for the Blind	130	38
Kentucky School for the Blind	97	15
Louisiana State School for the Blind	70	16
Maryland School for the Blind	90	17
Perkins Institution and Massachusetts School for the Blind	297	78
Michigan School for the Blind	169	47
Minnesota School for the Blind	100	28
Mississippi School for the Blind	75	16
Missouri School for the Blind	113	26
Montana State School for the Deaf and Blind[4]	25	no data
Nebraska School for the Blind	55	12
New Mexico School for the Blind	84	16
New York Institute for the Education of the Blind	125	31
New York State School for the Blind	160	41
North Carolina School for the Deaf and Blind	145	13

School	Total Enrollment	Enrollment in Classes Corresponding to High School Grades
North Dakota School for the Blind[3]	35	5
Ohio State School for the Blind	242	58
Oklahoma School for the Blind	143	24
Oregon State School for the Blind	48	10
Pennsylvania Institution for the Instruction of the Blind	268	57
South Carolina School for the Deaf and Blind	65	17
South Dakota School for the Blind	39	5
Tennessee School for the Blind[5]	236	71
Texas School for the Blind	240	72
Utah School for the Deaf and Blind	34	9
Virginia School for the Deaf and Blind	72	15
Washington State School for the Blind	69	18
Western Pennsylvania School for the Blind	147	22
West Virginia State Schools for the Deaf and Blind	109	28
Wisconsin School for the Blind	139	37
42 Total	4800	1039

1. Table 2. "Schools and Classes for the Blind, 1926-27," Bulletin, 1928, No. 9, Bureau of Education. Washington: Government Printing Office, 1928, pp. 3-5.

2. Statistics obtained from the Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1926, p. 11.

3. Estimated from 1921-22 data.

4. Statistics obtained from the Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1926, p. 142.

5. Includes both white and colored schools.

corresponding to the high school grades, with 297 students in the former and seventy-eight students in the latter. The smallest enrollment was found in the Arizona School for the Deaf and Blind, consisting of eight students.

Table XXX shows the distribution of enrollment in classes corresponding to the high school grades in forty residential schools for the blind in 1926-1927. In grouping five was used as the range of the class-interval.

Table XXX. Distribution of Enrollment in Classes Corresponding to the High School Grades in Schools for the Blind in 1926-1927

Class-Interval	Number of Schools
75-79	1
70-74	2
65-69	
60-64	1
55-59	2
50-54	
45-49	1
40-44	1
35-39	3
30-34	2
25-29	3
20-24	5
15-19	9
10-14	5
5- 9	3
0- 4	2
Total	40

Table XXX reveals that the largest number of schools

for the blind; namely, nine schools, in 1926-1927 had enrollments in their classes corresponding to the high school grades of fifteen to nineteen students. Four schools had enrollments in these classes of forty to forty-four students, forty-five to forty-nine students, sixty to sixty-four students, and seventy-five to seventy-nine students respectively. The smallest enrollments of one to four students were found in two schools and the largest enrollment of seventy-five to seventy-nine students was found in one school.

Table XXXI shows that Perkins Institution and Massachusetts School for the Blind had the largest total enrollment, 284 students, in the year 1930-1931, and the Pennsylvania Institution for the Instruction of the Blind had the largest enrollment in classes corresponding to the high school grades; namely, eighty-eight students. The Montana State School for the Deaf and Blind had the smallest total enrollment; namely, sixteen students for the year 1930-1931 and equalled the Arizona School for the Deaf and Blind in the number of students in classes corresponding to the high school grades; namely, two students.

Table XXXII shows the distribution of enrollment in classes corresponding to the high school grades in forty residential schools for the blind in 1930-1931. In grouping five was used as the range of the class-interval.

Table XXXI. Student Enrollment in Schools for the Blind 1930-1931[1]

School	Total Enrollment	Enrollment in Classes Corresponding to High School Grades
Alabama School for the Blind	158	34
Arizona School for the Deaf and Blind	18	2
Arkansas School for the Blind	119	61
California School for the Blind	108	47
Colorado School for the Deaf and Blind	63	17
Connecticut Institute for the Blind[2]	60	no data
Florida School for the Deaf and Blind[3]	87	10
Georgia Academy for the Blind[3]	102	11
Idaho State School for the Deaf and Blind	21	7
Illinois School for the Blind	258	59
Indiana School for the Blind	165	71
Iowa School for the Blind	158	60
Kansas State School for the Blind	115	32
Kentucky School for the Blind	156	31
Louisiana State School for the Blind	76	22
Maryland School for the Blind	72	20
Perkins Institution and Massachusetts School for the Blind	284	56
Michigan School for the Blind	166	49
Minnesota School for the Blind	102	23
Mississippi School for the Blind	64	14
Missouri School for the Blind	107	22
Montana State School for the Deaf and Blind	16	2
Nebraska School for the Blind	60	12
New Mexico School for the Blind	108	16
New York Institute for the Education of the Blind	132	36
New York State School for the Blind	145	40
North Carolina School for the Deaf and Blind	154	25

School	Total Enrollment	Enrollment in Classes Corresponding to High School Grades
North Dakota School for the Blind	37	13
Ohio State School for the Blind	224	60
Oklahoma School for the Blind	159	46
Oregon State School for the Blind	43	13
Pennsylvania Institution for the Instruction of the Blind	281	88
South Carolina School for the Deaf and Blind[3]	104	0
South Dakota School for the Blind	37	7
Tennessee School for the Blind	203	56
Texas School for the Blind	229	55
Utah School for the Deaf and Blind	29	4
Virginia School for the Deaf and Blind	81	14
Washington State School for the Blind	96	24
Western Pennsylvania School for the Blind	154	29
West Virginia State Schools for the Deaf and Blind	118	36
Wisconsin School for the Blind	139	43
42 Total	5008	1267

1. Statistics furnished by the Office of Education, Washington, D. C., at the request of the author, November, 1932.

2. Statistics obtained from the Directory of Activities for the Blind in the United States and Canada. New York: American Foundation for the Blind, 1932, p. 32.

3. Included both white and colored schools.

Table XXXII. Distribution of Enrollment in Classes Corresponding to the High School Grades in Schools for the Blind in 1930-1931

Class-Interval	Number of Schools
85-89	1
80-84	
75-79	
70-74	1
65-69	
60-64	3
55-59	4
50-54	
45-49	3
40-44	2
35-39	2
30-34	3
25-29	2
20-24	5
15-19	2
10-14	7
5- 9	2
0- 4	3
Total	40

Table XXXII reveals that the largest number of schools for the blind; namely, eight schools, in 1930-1931 had enrollments in their classes corresponding to the high school grades of ten to fourteen students. Two schools had enrollments in these classes of seventy to seventy-four students and eighty-five to eighty-nine students respectively. The smallest enrollments of one to four students were found in three schools and the largest enrollment of eighty-five to eighty-nine students was found in one school.

b. Degree of Blindness

(1) Senior High School. It was found that some of the students in the residential schools for the blind had sufficient vision to be able to read print, but due to the condition of their eyes such a practice was not advisable. By using tactile material for reading and writing considerable strain on their eyes was thereby minimized. Many students in these schools have had sufficient vision to be of practical use to them but they were not able to read ordinary printed material. Table XXXIII presents comparative figures for the degree of blindness of the senior high school students in the twenty-nine schools which furnished these data for the year 1931.

Table XXXIII reveals that in the twenty-nine schools for the blind there was a total number of 355 high school students totally blind and 358 high school students with partial vision. A further analysis shows that of the number of students who had partial vision 170 were able to read print and 178 were not able to read print. It must be noted that these last two figures were estimated on the basis of twenty-eight schools as one school did not furnish this specific information. Generally speaking, it can be said that in the twenty-nine schools practically one-half of the high school students were totally blind and the other half had partial vision. Again there was an almost equal division between those who could

Table XXXIII. Number of Senior High School Students Totally and Partially Blind in Twenty-Nine Schools for the Blind in 1931

School	Totally Blind	Partially Blind	Able to Read Print	Not Able to Read Print
Alabama School for the Blind	15	21	7	14
Arkansas School for the Blind	9	20	5	15
California School for the Blind	14	10	6	4
Connecticut Institute for the Blind	5	7	5	2
Florida School for the Deaf and Blind	4	4	2	2
Idaho School for the Deaf and Blind	5	1	1	0
Illinois School for the Blind	12	42	13	29
Indiana School for the Blind	16	11	9	2
Kansas State School for the Blind	16	11	4	7
Kentucky School for the Blind	18	10	3	7
Louisiana State School for the Blind	6	14	10	4
Maryland School for the Blind	5	15	10	5
Massachusetts School and Perkins Institution for the Blind	21	14	9	5
Minnesota School for the Blind	11	10	5	5
Montana School for the Deaf and Blind	15	6	0	6
New Mexico School for the Blind	7	9	9	0
New York State School for the Blind	24	12	0	12
North Carolina State School for the Deaf and Blind	11	11	5	6
North Dakota School for the Blind	3	6	3	3
Oklahoma School for the Blind	24	21	9	12
Oregon State School for the Blind	4	9	6	3
South Carolina School for the Deaf and Blind	12	10	no data	no data
South Dakota School for the Blind	6	0	0	0
Tennessee School for the Blind	26	27	20	7
Virginia School for the Deaf and Blind	9	9	1	8

Table XXXIII. Number of Senior High School Students Totally and Partially Blind in Twenty-Nine Schools for the Blind in 1931, continued

School	Totally Blind	Partially Blind	Able to Read Print	Not Able to Read Print
Washington State School for the Blind	6	7	2	5
Western Pennsylvania School for the Blind	16	15	10	5
West Virginia Schools for the Deaf and Blind	9	10	6	4
Wisconsin School for the Blind	26	16	10	6
29 Total	355	358	170	178

Table XXXIV. Number of Junior High School Students Totally and Partially Blind in Nine Schools for the Blind in 1931

School	Totally Blind	Partially Blind	Able to Read Print	Not Able to Read Print
Arkansas School for the Blind	10	25	10	15
California School for the Blind	12	18	13	5
Florida School for the Deaf and Blind	5	3	2	1
Idaho School for the Deaf and Blind	4	4	2	2
Indiana School for the Blind	23	14	12	2
Kansas State School for the Blind	9	6	1	5
Kentucky School for the Blind	25	10	2	8
South Dakota School for the Blind	2	1	1	0
Washington State School for the Blind	12	17	7	10
9 Total	102	98	50	48

read print and those who could not read print.

(2) Junior High School. The data tabulated in Table XXXIV were obtained from nine junior high school departments relative to the degree of blindness of the student population by means of questionnaires sent to the superintendents of the respective schools.

Table XXXIV shows that in nine junior high school departments in 1931 there was a total number of 102 totally blind students and ninety-eight with partial vision, a slight difference in numbers being in favor of the totally blind. Among the students who were partially blind fifty of them were able to read print and forty-eight of them did not have sufficient vision to read print at all, thus there existed an almost equal division between the two groups.

The fact that there were present in secondary schools for the blind in 1931 so many students with partial vision, even vision that was capable of reading print, raises the question whether the same instructional methods should be used with partially and totally blind children.[1]

c. Age and Grade Distribution

It was a part of the original plan to find out the age of the students in the various grades of the junior and

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[1] See Chapter Three, pp. 93-95.

senior high schools for the years 1921 and 1931. The data for 1921 were so incomplete as to render them of no value.

(1) Senior High School. Table XXXV presents an age and grade distribution for grades nine, ten, eleven, and twelve and for ages thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, twenty-one, and over twenty-one based on data furnished by the following twenty-eight schools for the blind: Alabama School for the Blind, Arkansas School for the Blind, California School for the Blind, Connecticut School for the Blind, Florida School for the Deaf and Blind, Idaho School for the Deaf and Blind, Illinois School for the Blind, Indiana School for the Blind, Kansas State School for the Blind, Kentucky School for the Blind, Louisiana State School for the Blind, Maryland School for the Blind, Minnesota School for the Blind, Missouri School for the Blind, New Mexico School for the Blind, New York State School for the Blind, North Carolina State School for the Blind and the Deaf, North Dakota School for the Blind, Oklahoma School for the Blind, Oregon State School for the Blind, Perkins Institution and Massachusetts School for the Blind, South Dakota School for the Blind, Tennessee School for the Blind, Virginia School for the Deaf and Blind, Washington State School for the Blind, Western Pennsylvania School for the Blind, West Virginia State Schools for the

Table XXV. Age and Grade Distribution of Students in Twenty-Eight Senior High Schools for the Blind in 1931

Year	Grade							
	IX		X		XI		XII	
	No.	Per Cent	No.	Per Cent	No.	Per Cent	No.	Per Cent
13	2	1.0	--	---	--	---	--	---
14	2	1.0	1	.5	--	---	--	---
15	21	11.0	10	5.0	--	---	--	---
16	34	18.0	26	13.5	6	3.0	--	---
17	34	18.0	23	12.0	24	13.0	3	3.0
18	37	19.0	45	24.0	28	16.0	15	14.4
19	25	13.0	27	14.0	41	23.0	21	20.2
20	18	10.0	26	13.5	30	17.0	25	24.0
21	8	4.0	10	5.0	22	12.0	15	14.4
Over 21	9	5.0	24	12.5	29	16.0	25	24.0
Total	190	100.0	192	100.0	180	100.0	104	100.0

Deaf and Blind, and Wisconsin School for the Blind.

It was impossible to include data for the Arizona School for the Deaf and Blind and the New York Institute for the Education of the Blind in the tables of Sections 2, 3, and 4 because these schools did not have a definite junior or senior high school organization in 1931. In the case of the Arizona School for the Deaf and Blind only two students were doing high school work in 1931.[1]

The New York Institute for the Education of the Blind has been a part of the University of the State of New York. "Much of the work in the school is individual and the pupils gain their credits not by regimentation but by single and individual achievement."[2]

Table XXXV shows that there was a comparable total student population in grades nine, ten, and eleven in the twenty-eight schools for the blind in 1931. The twelfth grade was decidedly smaller in enrollment than the other three grades. For grade nine the bulk of students grouped about the ages sixteen, seventeen, eighteen, and nineteen. For grade ten the majority of the students were sixteen,

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1. Data obtained through communication with the superintendent of the Arizona School for the Deaf and Blind in April, 1932.

2. Quotation from a letter dated April, 1932 from the principal of the New York Institute for the Education of the Blind to the author.

seventeen, eighteen, nineteen, twenty, and over twenty-one years old. For grade eleven most of the students were seventeen, eighteen, nineteen, twenty, twenty-one, and over twenty-one years of age. For grade twelve the majority of students were nineteen, twenty, and over twenty-one years of age. In grade nine the largest number of students; namely, thirty-seven were eighteen years old; in grade ten the largest number of students; namely, forty-five were eighteen years of age; in grade eleven the largest number of students; namely, forty-one were nineteen years old; and in grade twelve the largest number of students; namely, twenty-five were twenty years and over twenty-one years of age.

No student was less than thirteen years of age in the ninth grade; no student was less than fourteen years old in the tenth grade; no student was less than sixteen years of age in the eleventh grade; and no student was less than seventeen years old in the twelfth grade. In the four grades there was a total of eighty-seven students, or thirteen per cent, of the total enrollment over twenty-one years of age.

Koos stated that in the public schools the normal age for ninth grade students was fourteen years; for the tenth grade students it was fifteen years; for eleventh grade students it was sixteen years; and for twelfth grade students

it was seventeen years.[1] In such a case in the ninth grade in the schools for the blind referred to in Table XXXV one per cent of the students was younger than the normal age and ninety-eight per cent was older than the normal age for the grade; in the tenth grade one-half of a per cent of the students was younger than the normal age and ninety-four and a half per cent of the students was older than the normal age for the grade; in the eleventh and twelfth grades no student was younger than the normal age and ninety-seven per cent of the students in each instance was older than the normal age for the grade.

In the ninth grade one per cent of the students was the normal age for the grade; in the tenth grade five per cent of the students was the normal age for the grade; and in the eleventh and twelfth grades three per cent of the students in each case was the normal age for the grade.

There are several explanations that might be given for the presence of so many older students in secondary schools for the blind, but these have been discussed in some detail elsewhere in this study.[2]

(2) Junior High School. Statistics regarding the age and grade distribution in Table XXXVI were obtained from the

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1. Koos, Leonard V. Private and Public Secondary Education. Chicago: The University of Chicago Press, 1931, p. 48.

2. See Chapter Three, pp. 96-98.

superintendents of the following nine schools: Arkansas School for the Blind, California School for the Blind, Florida School for the Deaf and Blind, Idaho School for the Deaf and Blind, Indiana School for the Blind, Kansas State School for the Blind, Kentucky School for the Blind, South Dakota School for the Blind, and the Washington State School for the Blind. These data refer only to the year 1931 as the data for 1921 that were requested at the same time were too insufficient to render comparisons convincing.

Table XXXVI. Age and Grade Distribution of Students in Nine Junior High Schools for the Blind in 1931

Year	Grade					
	VII		VIII		IX	
	No.	Per Cent	No.	Per Cent	No.	Per Cent
12	8	13.0	1	2.0	1	1.0
13	11	17.0	8	12.0	4	5.0
14	13	21.0	11	17.0	3	4.0
15	13	21.0	15	23.0	15	19.0
16	5	8.0	12	18.4	12	16.0
17	6	9.0	6	9.2	19	25.0
18	5	8.0	6	9.2	12	16.0
Over 18	2	3.0	6	9.2	11	14.0
Total	63	100.0	65	100.0	77	100.0

In Table XXXVI there is seen an increase in the total

enrollment of the nine junior high schools from grade seven to grade nine in the year 1931. In the seventh grade the largest number of students was fourteen and fifteen years of age; in the eighth grade the largest number of students was fifteen years old; and in the ninth grade the largest number of students was seventeen years of age. Nineteen students, or nine per cent of the total junior high school population, were over eighteen years old. No student was less than twelve years of age in any of the three grades of the junior high schools.

Table XXXVI shows that a large number of blind students in the nine junior high school departments in 1931 was older than the normal age but none less than the normal age generally ascribed to public school students.[1]

d. Number of Graduates

The number of graduates from the senior high school departments of schools for the blind for the years 1922 and 1927 are to be found listed in Tables XXXVII and XXXVIII. The Office of Education in Washington, D. C. has made these figures obtainable for only the two years mentioned and it was not possible to gather as complete a compilation from other sources.

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[1] Hanus, Paul H. Opportunity and Accomplishment in Secondary Education, The Inglis Lecture, 1926. Cambridge: Harvard University Press, 1926, pp. 37-38.

Table XXXVII. Number of Graduates of Thirty-Nine Senior High Schools for the Blind in 1922[1]

School	Boys	Girls	Total
Alabama School for the Blind	no data	no data	no data
Arizona School for the Deaf and Blind	0	0	0
Arkansas School for the Blind	0	3	3
California School for the Blind	2	1	3
Colorado School for the Deaf and Blind	0	0	0
Connecticut Institute for the Blind	0	0	0
Florida School for the Deaf and Blind	0	1	1
Georgia Academy for the Blind	0	0	0
Idaho State School for the Deaf and Blind	0	0	0
Illinois School for the Blind	no data	no data	no data
Indiana School for the Blind	3	2	5
Iowa School for the Blind	3	3	6
Kansas State School for the Blind	0	2	2
Kentucky School for the Blind	4	5	9
Louisiana State School for the Blind	2	5	7
Maryland School for the Blind	0	0	0
Perkins Institution and Massachusetts School for the Blind	6	0	6
Michigan School for the Blind	1	1	2
Minnesota School for the Blind	3	0	3
Mississippi School for the Blind	0	0	0
Missouri School for the Blind	no data	no data	no data
Montana State School for the Deaf and the Blind	0	0	0
Nebraska School for the Blind	0	0	0
New Mexico School for the Blind	0	0	0
New York Institute for the Education of the Blind	0	0	0
New York State School for the Blind	1	0	1
North Carolina School for the Deaf and the Blind	0	0	0
North Dakota School for the Blind	0	1	1

School	Boys	Girls	Total
Ohio State School for the Blind	7	1	8
Oklahoma School for the Blind	3	3	6
Oregon State School for the Blind	2	0	2
Pennsylvania Institution for the Instruction of the Blind	12	2	14
South Carolina School for the Deaf and Blind	0	0	0
South Dakota School for the Blind	1	1	2
Tennessee School for the Blind	1	8	9
Texas School for the Blind	5	2	7
Utah School for the Deaf and Blind	0	0	0
Virginia School for the Deaf and Blind	1	2	3
Washington State School for the Blind	0	0	0
Western Pennsylvania School for the Blind	3	2	5
West Virginia State Schools for the Deaf and Blind	3	0	3
Wisconsin School for the Blind	2	0	2
Total	65	45	110

1. Table 5. "Schools and Classes for the Blind, 1921-22." Bulletin, 1923, No. 51, Bureau of Education. Washington: Government Printing Office, 1923, pp. 8-10.

In Table XXXVII it is seen that out of a total of 110 graduates from thirty-nine senior high schools for the blind in 1922, sixty-five were boys and forty-five were girls. Fifteen of these schools had no graduates in that year.

Table XXXVIII. Number of Graduates of Forty-Two Senior High Schools for the Blind in 1927[1]

School	Boys	Girls	Total
Alabama School for the Blind	3	3	6
Arizona School for the Deaf and Blind	0	0	0
Arkansas School for the Blind	2	2	4
California School for the Blind	4	5	9
Colorado School for the Deaf and Blind	4	0	4
Connecticut Institute for the Blind	2	3	5
Florida School for the Deaf and Blind	0	0	0
Georgia Academy for the Blind	0	0	0
Idaho State School for the Deaf and Blind	1	1	2
Illinois School for the Blind	4	4	8
Indiana School for the Blind	1	2	3
Iowa School for the Blind	3	3	6
Kansas State School for the Blind	4	2	6
Kentucky School for the Blind	1	0	1
Louisiana State School for the Blind	11	4	15
Maryland School for the Blind	0	1	1
Perkins Institution and Massachusetts School for the Blind	4	5	9
Michigan School for the Blind	4	3	7
Minnesota School for the Blind	2	0	2
Mississippi School for the Blind	0	0	0
Missouri School for the Blind	2	2	4
Montana State School for the Deaf and the Blind[2]	0	0	0
Nebraska School for the Blind	1	0	1
New Mexico School for the Blind	0	0	0
New York Institute for the Education of the Blind	0	0	0
New York State School for the Blind	1	3	4
North Carolina School for the Deaf and the Blind	0	0	0
North Dakota School for the Blind	0	1	1

School	Boys	Girls	Total
Ohio State School for the Blind	2	0	2
Oklahoma School for the Blind	2	0	2
Oregon State School for the Blind	1	1	2
Pennsylvania Institution for the Instruction of the Blind	3	3	6
South Carolina School for the Deaf and Blind	3	2	5
South Dakota School for the Blind	0	1	1
Tennessee School for the Blind	1	6	7
Texas School for the Blind	1	2	3
Utah School for the Deaf and Blind	0	1	1
Virginia School for the Deaf and Blind	1	1	2
Washington State School for the Blind	5	0	5
Western Pennsylvania School for the Blind	3	2	5
West Virginia State Schools for the Deaf and Blind	6	1	7
Wisconsin School for the Blind	4	2	6
42 Total	86	66	152

1. Table 2. "Schools and Classes for the Blind, 1926-27." Bulletin, 1928, No. 9, Bureau of Education. Washington: Government Printing Office, 1928, pp. 3-5.

2. Data furnished by means of a letter from the superintendent of the Montana State School for the Deaf and Blind to the author, May, 1932.

According to Table XXXVIII there were 152 graduates from the forty-two secondary schools for the blind in 1927. Of this number eighty-six were boys and sixty-six were girls.

Nine schools had no graduates in that year. The larger number of graduates for 1927 may be accounted for by the fact that the number of graduates for 1922 was not given by three schools for the blind.

e. Nationality

The number of residential schools for the blind reporting the enrollment of foreign born children in their institutions was too small to make deductions from comparative figures convincing. It is thus of interest rather than of importance to note that students born in the following countries attended Perkins Institution and Massachusetts School for the Blind during the period 1921-1931: Canada, Greece, and Turkey.[1] The Pennsylvania Institution for the Instruction of the Blind listed among its foreign born population for the same years students who were: Italian, Hebrew, English, Irish, Polish, German, Hungarian, Russian, Scotch, Swiss, Austrian, Greek, Armenian, Chinese, Swedish, Lithuanian, Canadian, and Roumanian.[2] The Colorado School for the Deaf and Blind has tabulated its

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1. See the Annual Reports of the Perkins Institution and Massachusetts School for the Blind for the years: 1921, 1922, 1924, 1926, 1928, 1929, and 1930.

2. See the Annual Reports of the Pennsylvania Institution for the Instruction of the Blind for the years: 1921, 1922, 1923, 1924, 1925, 1926, 1927, and 1930.

foreign born children for the years 1883-1930 inclusive and out of a total enrollment of 417 blind students twenty-three of them have been born in foreign countries; namely, Canada, three; Denmark, two; England, five; Finland, one; Hungary, one; Ireland, one; Mexico, three; Russia, three; Scotland, one; Slavonia, one; Sweden, one; and Wales, one.[1]

It has been impossible to estimate further the nationalities represented in the student bodies of the various schools. Some very interesting facts would probably emerge from sufficient data in this connection and additional research would add to a more definite knowledge of problems inherent in student populations.

3. Time Distribution

a. Length of Class Periods

In secondary schools for the blind there were generally found four departments: literary, music, physical education, and industrial. Through questionnaires to the superintendents of the schools the length of the class periods in each of these departments in 1931, which are enumerated in Table XXXIX and Table XL, was ascertained.

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1. Report of the Board of Trustees of the Colorado School for the Deaf and Blind, For the Year Ending June 30, 1930. Colorado Springs: Printed at the School, 1930, pp. 57-58.

(1) Senior High School. Data were obtained from twenty-nine senior high schools for the blind regarding the length of the regular class periods in 1931. In the cases where the length of the class period varied, only the maximum number of minutes devoted to the subjects of the department were indicated.

Table XXXIX shows that in the literary department in twenty-nine senior high schools for the blind the range in number of minutes constituting the length of the regular class periods in 1931 was thirty to fifty minutes, with a median number of minutes equalling forty-five. In the music department the range in number of minutes was from twenty-five to ninety minutes, with a median of forty minutes. In the physical education department the range in number of minutes was twenty-five to sixty minutes, with a median of forty-five minutes. In the industrial department the range in number of minutes was thirty to one hundred and twenty minutes, with a median of fifty-five minutes.

The median number of minutes regarding the length of the regular class periods was the same, forty-five minutes, in both the literary and physical education departments. The largest median number of minutes for the regular class periods was in the industrial department and the smallest median number of minutes was in the music department.

The industrial department had the greatest variation in range of minutes in the length of the regular class

Table XXXIX. Standard Length in Minutes of the Regular Class Periods in the Four Departments of Twenty-Nine Senior High Schools for the Blind in 1931

School	Department			
	Literary	Music	Physical Education	Industrial
Alabama School for the Blind	45	45	30	90
Arkansas School for the Blind	45	90	45	90
California School for the Blind	40	40	45	60
Connecticut Institute for the Blind	40	40	40	40
Florida School for the Deaf and Blind	30	30	45	120
Idaho School for the Deaf and Blind	30	30	45	45
Illinois School for the Blind	40	40	40	40
Indiana School for the Blind	45	45	45	45
Kansas State School for the Blind	45	30	60	60
Kentucky School for the Blind	45	30	45	90
Louisiana State School for the Blind	35	35	35	35
Maryland School for the Blind	40	40	40	40
Massachusetts School and Perkins Institution for the Blind	50	50	50	50
Michigan School for the Blind	48	48	48	48
Minnesota School for the Blind	40	40	40	40
Missouri School for the Blind	45	60[1]	60	60
New Mexico School for the Blind	45	60[1]	60	90[1]
New York State School for the Blind	50	50	50	50
North Carolina School for the Blind	40	40	40	60
North Dakota School for the Blind	30	30	30	30
Oklahoma School for the Blind	50	50	50	50
Oregon State School for the Blind	30	30	25	60
South Dakota School for the Blind	40	40	40	80[1]
Tennessee School for the Blind	45[1]	40[1]	40	40[1]
Virginia School for the Deaf and Blind	30	30	45	60

Table XXXIX. Standard Length in Minutes of the Regular Class Periods in the Four Departments of Twenty-Nine Senior High Schools for the Blind in 1931, continued

School	Department			
	Literary	Music	Physical Education	Industrial
Washington State School for the Blind	50	25	50	no data
Western Pennsylvania School for the Blind	45	30	30	60
West Virginia Schools for the Deaf and Blind	45	30	45[1]	60[1]
Wisconsin School for the Blind	40	40	40	40
29 Total				

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[1] Only the maximum number of minutes listed.

periods, thirty to one hundred and twenty minutes, and the literary department had the smallest variation in range of minutes, thirty to fifty minutes.

For the purpose of comparing practices in senior high schools for the blind with public senior high schools in respect to the length of regular class periods the following statement by Foster with reference to the public schools is quoted, "....Undoubtedly the majority of senior and four-year high schools have a forty-five minute period...."[1] According to this citation the regular class periods in schools for the blind were equal in the literary and physical education departments to the standard for the public schools, and they were five minutes below this standard in the music department, and ten minutes above it in the industrial department.

(2) Junior High School. The data in Table XL referring to the standard length in minutes of the regular class periods in 1931 were compiled from answers to questionnaires received from nine junior high schools for the blind. In one instance, more than one figure was quoted for the length of the class periods, and consequently only the maximum number of minutes was listed in the table.

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[1] Foster, Herbert H. High School Administration. New York: The Century Co., 1928, p. 310.

Table XL. Standard Length in Minutes of the Regular Class Periods in the Four Departments of Nine Junior High Schools for the Blind in 1931

School	Department			
	Literary	Music	Physical Education	Industrial
Arkansas School for the Blind	45	90	45	90
California School for the Blind	40	40	45	60
Florida School for the Deaf and Blind	30	30	45	120
Idaho School for the Deaf and Blind	25	25	45	45
Indiana School for the Blind	45	45	45	45
Kansas State School for the Blind	30	30	45	60
Kentucky School for the Blind	45	30	45	45
South Dakota School for the Blind	40	40	40	40
Washington State School for the Blind	50[1]	25	50	50
9 Total				

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[1] Only the maximum number of minutes listed.

According to Table XL in the nine junior high schools for the blind in 1931 the range in minutes of the regular class periods in the literary department was twenty-five to fifty minutes and the median was forty minutes. In the music department the range in number of minutes was twenty-five to ninety minutes and the median was thirty minutes. In the physical education department the range in number of minutes was forty to fifty minutes and the median was forty-five minutes. In the industrial department the range in number of minutes was forty to one hundred and twenty minutes and the median was fifty minutes.

The median number of minutes of the regular class periods was largest in the industrial department, fifty minutes, and smallest in the music department, thirty minutes.

The industrial department had the greatest variation in range of minutes in the length of the class periods, forty to one hundred and twenty minutes, and the physical education department had the smallest variation in range of minutes, forty to fifty minutes.

Considering both the senior and junior high school departments in the schools included in Tables XXXIX and XL it was found that the median number of minutes of the regular class periods in the literary and industrial departments was five minutes longer in the senior high school; in the music department the median number of minutes was ten minutes longer in the senior high school; and in the physical

education department the median number of minutes was the same for both the senior and junior high schools.

b. Length of the School Year

A few instances are cited to show the practices in schools for the blind in regard to the length of the school year and also the vacation periods and holidays that have been generally observed.

> Indiana School for the Blind. The school term (nine months) commences on the fourth Wednesday of September and closes early in June. There is no vacation during the session.[1]
>
> Maryland School for the Blind. The school term extends from about the middle of September to approximately the middle of June, with vacations at Christmas and Easter. School is conducted on Saturday and not on Monday, and pupils from Baltimore go home over Sunday.[2]
>
> Colorado School for the Deaf and Blind. The School opens in September on the first Wednesday after Labor Day, and closes on the first Wednesday of June, thus giving the pupils nine months at the School and three months at home each year.[3]

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1. The Eighty-Third Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind, For the Fiscal Year Ending September 30, 1929, Indianapolis, p. 65.

2. Biennial Report. Sixty-Sixth and Sixty-Seventh Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1928-September 30, 1930, Published by the Corporation, January, 1931, p. 35.

3. Report of the Board of Trustees of the Colorado School for the Deaf and Blind, For the Year Ending June 30, 1930, Colorado Springs: Printed at the School, p. 61.

Iowa School for the Blind. The school year at the Iowa School for the Blind is a nine-months year simply because it is regarded as best for the highest welfare of the boys and girls who attend the school to have the long vacation. There are several reasons, among others being the one that the longer vacation keeps the boy or girl in touch with the home in a more vital way.[1]

Minnesota School for the Blind. There is a Christmas vacation of about ten days and a summer vacation at the end of the school year in June which continues until its opening early in September.[2]

Kentucky School for the Blind. The school session begins on the second Wednesday in September and closes the second Wednesday in June.[3]

Missouri School for the Blind. School opens the second Wednesday in September and closes the first week in June.[5]

Tennessee School for the Blind. The school session of nine months or more is divided into three terms of nearly equal length.[5]

All pupils are expected to visit their homes during the Christmas holidays [approximately two weeks] , but permission is not given for visits at Thanksgiving and Easter.[6]

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1. The Iowa School for the Blind, Vinton, Iowa, 1929-30 , p. [19] .

2. Twenty-Sixth Biennial Report, Minnesota School for the Blind, Faribault, Minnesota, For the Two Years Ending June 30, 1930, p. 7.

3. Report of the Kentucky School for the Blind at Louisville, Kentucky, For the Year Ending June 30, 1929, p. 41.

4. Thirty-Seventh Biennial Report of the Missouri School for the Blind to the Fifty-Sixth General Assembly, January 1, 1931, p. 31.

5. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 22.

6. *Ibid.*, p. 4.

Montana School for the Deaf and Blind. The annual session of school begins the second Wednesday in September and closes the second Wednesday in June. No extended holiday will be given at Christmas, and pupils are not allowed to go home unless there are excellent reasons and conditions justifying permissions.[1]

The New York Institute for the Education of the Blind. The ninety-ninth year's session of the Institute opened September 15, 1930 and concluded June 19, 1931.[2]

Pennsylvania Institution for the Instruction of the Blind. School is generally closed for about two weeks at Christmas and for ten days or more at Easter. Pupils are not required to go to their homes for these vacations, when this involves long railroad trips, but they are encouraged to do so in order to keep up the home ties.[3]

The program for Saturday is the same as other week days until the dinner hour.[4]

Texas School for the Blind. Schedule of Holidays. November 11; November 27 and 28; Christmas holidays from December 19 to January 5; March 2; April 21.[5]

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1. Thirty-Fourth Annual Report of the Montana Schools for Deaf, Blind, and Backward Chidlren 1928-29. Boulder: Printed by the Pupils, Montana School for the Deaf and the Blind, p. 25.

2. Year-Book of the New York Institute for the Education of the Blind, Ninety-Ninth Year, 1931, New York: Charles Francis Press, p. 33.

3. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Eighth Annual Report, 1930, p. 93.

4. *Ibid.*, p. 73.

5. Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin: Von Boechmann-Jones Co., Printers, p. 20.

> Mississippi School for the Blind. The school begins the second week in September and ends the last week in May.[1]
>
> South Dakota School for the Blind. The school is in session nine months of the year, beginning the first of September, and closing the last of May.[2]
>
> Connecticut Institute for the Blind. The school session extends from the second Monday in September through the second Friday in June, with the usual Christmas holiday recess.[3]

From the foregoing examples it is evident that the school year in those institutions for the blind was of nine months duration; most of the schools closed in June and opened in September on various dates.

As most of the students in residential schools for the blind must travel a considerable distance to reach their homes, it has seemed advisable to provide for a longer vacation in the summer and to minimize the holidays during the school year. The most important reason, however, for a long summer vacation was given in the statement made in the report of the Iowa School for the Blind. It is

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[1] The Biennial Report of the Trustees of the Mississippi School for the Blind, From June 30, 1925 to July 1, 1927, p. 28.

[2] South Dakota School for the Blind, Gary, South Dakota, 1925-26, p. 1.

[3] Biennial Report of the Connecticut Institute for the Blind, For the Fiscal Year Ending June 30, 1925 and the Fiscal Year Ending June 30, 1926, p. 20.

It is imperative that these handicapped children shall remain long enough each year with their families in order that an estrangement shall not occur. They must not be allowed to drift from their home circles, nor must the members of their families be allowed to lose interest in them or neglect their responsibilities toward them. The fact must not be overlooked, too, that the home life of blind children is the best antidote for the institutional influence that is unavoidable in schools of this nature.

The Christmas vacation was usually found to be two weeks in extent, and in most cases it was optional whether or not the children remain at school or spend this time at their homes. There was found no apparent univormity in practice relative to the observation of occasional holidays.

There was mention in one case of granting Monday instead of Saturday as a free day, and in another case it was specified that regular school work was conducted on Saturday morning. There was no evidence, however, to show that such procedures were common among these special schools.

4. Grade and Class Distribution

a. Classification of Grades

(1) Senior High School. The data for the grade distribution for twenty-nine senior high schools for the blind

Table XLI. Grade Distribution in Twenty-Nine Senior High Schools for the Blind in 1931

School	Grade					
Alabama School for the Blind	8	9	10	11		
Arkansas School for the Blind			10	11	12	
California School for the Blind			10	11	12	
Connecticut Institute for the Blind		9	10	11	12	
Florida School for the Deaf and Blind		9	10	11	12	
Idaho State School for the Deaf and Blind			10	11	12	
Illinois School for the Blind		9	10	11	12	
Indiana School for the Blind			10	11	12	
Kansas State School for the Blind		9	10	11	12	
Kentucky School for the Blind			10	11	12	
Louisiana State School for the Blind	8	9	10	11		
Maryland School for the Blind		9	10	11	12	
Perkins Institution and Massachusetts School for the Blind		9	10	11	12	
Minnesota School for the Blind		9	10	11	12	
Missouri School for the Blind		9	10	11	12	
New Mexico School for the Blind		9	10	11	12	
New York State School for the Blind		9	10	11	12	
North Carolina School for the Deaf and the Blind	8	9	10	11		
North Dakota School for the Blind		9	10	11	12	13
Oklahoma School for the Blind		9	10	11	12	
Oregon State School for the Blind	8	9	10	11		
South Carolina School for the Deaf and Blind	8	9	10	11		
South Dakota School for the Blind		9	10	11	12	
Tennessee School for the Blind		9	10	11	12	
Virginia School for the Deaf and Blind		9	10	11	12	
Washington State School for the Blind			10	11	12	
Western Pennsylvania School for the Blind		9	10	11	12	
West Virginia State Schools for the Deaf and Blind		9	10	11	12	
Wisconsin School for the Blind		9	10	11	12	
29 Total						

in 1931 found in Table XLI were obtained from the superintendents of the several schools represented.

Table XLI shows that seventeen of the senior high schools for the blind in 1931 were of the traditional form, composed of the four grades, nine, ten, eleven, and twelve. Six of the schools had three year organizations including grades ten, eleven, and twelve, and in each of these schools there was maintained a three year junior high school. In one school in Table XLI the senior high school department consisted of five grades, nine to thirteen inclusive. In five schools the senior high school department included grades eight, nine, ten, and eleven.

The reorganized form of public senior high school consists of the three grades ten, eleven, and twelve, but there still exist many public schools which cling to the traditional form of organization composed of grades nine, ten, eleven, and twelve.[1]

(2) Junior High School. The data relative to the grades composing the nine junior high school departments in 1931 found in Table XLII were obtained by means of questionnaires sent to the superintendents of the respective schools.

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[1] Williams, L. A. and Rice, G. A. Principles of Secondary Education. Boston: Ginn and Co., 1927, pp. 325-327.

Table XLII. Grade Distribution in Nine Junior High Schools for the Blind in 1931

School	Grade			
Arkansas School for the Blind		7	8	9
California School for the Blind		7	8	9
Florida School for the Deaf and Blind		7	8	
Idaho State School for the Deaf and Blind		7	8	9
Indiana School for the Blind		7	8	9
Kansas State School for the Blind	6	7	8	
Kentucky School for the Blind		7	8	9
South Dakota School for the Blind		7	8	
Washington State School for the Blind		7	8	9
9 Total				

Table XLII reveals that in 1931 six junior high schools for the blind consisted of grades seven, eight, and nine. In two schools grades seven and eight constituted the junior high school department, and in one school this department was composed of grades six, seven and eight.

In the public junior high schools the dominant form of organization comprises grades seven, eight, and nine, but also there is considerable variety in the combinations of grades that are found in various sections throughout the country.[1]

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[1] Williams, L. A. and Rice, G. A. op. cit., pp. 323-325.

b. Class Size

Survey sheets were sent to the superintendents of the forty-two secondary schools for the blind asking for an estimation of the number of senior high school students in the largest, smallest, and median size classes in the literary departments of their schools in 1921. Responses from twenty-five of these schools have been tabulated in Table XLIII.

Table XLIII reveals that the maximum size classes in the literary department in the twenty-five senior high schools for the blind in 1931 ranged from three to twenty-six students; the minimum size classes ranged from one to nine students; and the median size classes ranged from three to fifteen students. The median number of students in the maximum size classes was found to be thirteen; in the minimum size classes it was four; and in the median size classes it was eight.

Huddleson gave the average size class in public secondary schools for 1928 as 27.4 students.[1]

Generally speaking, the forms of organization in the senior and junior high schools for the blind were found to be comparable to those of the public schools. With reference to class size, the evidence shows that classes in

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1. Huddleson, Earl "Class-Size Opinions, Evidence, and Policies in Secondary Schools." *The North Central Association Quarterly*, 4:196 (September, 1929).

Table XLIII. Class Size in the Literary Department of Twenty-Five Senior High Schools for the Blind in 1931

School	Number of Students		
	Maximum	Minimum	Median
Alabama School for the Blind	14	7	9
Arkansas School for the Blind	13	9	10
California School for the Blind	10	4	7
Connecticut Institute for the Blind	5	2	4
Florida School for the Deaf and Blind	5	3	4
Idaho School for the Deaf and Blind	3	2	3
Illinois School for the Blind	24	8	12.5
Indiana School for the Blind	24	7	15
Kansas State School for the Blind	10	3	6
Kentucky School for the Blind	18	8	12
Maryland School for the Blind	8	3	5.4
Massachusetts School and Perkins Institution for the Blind	9	3	6.5
Minnesota School for the Blind	10	3	6.8
Missouri School for the Blind	17	6	12.5
New Mexico School for the Blind	9	4	7
New York State School for the Blind	26	4	11
North Carolina State School for the Deaf and Blind	11	3	11
Oregon State School for the Blind	8	3	4
South Dakota School for the Blind	4	1	3
Tennessee School for the Blind	18	9	13.25
Virginia School for the Deaf and Blind	17	4	9
Washington State School for the Blind	17	3	9
Western Pennsylvania School for the Blind	13	5	8
West Virginia Schools for the Deaf and Blind	14	5	8
Wisconsin School for the Blind	13	9	10
25 Total			

schools for the blind were decidedly smaller than those in the public schools.

III. Administrative Aids

1. Standards

It would be generally accepted among those acquainted with the work of the blind that the following conditions have prevailed in the residential schools for the blind. Secondary schools for the blind have been characterized by a virtually selected group of children qualified to pursue the work of the high school grades. A great many of the pupils have remained in one school for both elementary and secondary work which has given ample opportunity for continuity in educational guidance and training. For those pupils who have not been able to undertake high school academic work there have been opportunities in the industrial department and, where aptitude was manifested, in the music department. There was no urgent pressure from below to shove pupils into the advanced grades as is frequently found to be the case in the public schools. Schools for the blind have had comparatively small enrollments and the classes have not been crowded. This has allowed for the recognition of individual differences and emphasis where necessary on individual instruction. Cooperation between teachers and pupils has been fostered by the intimacy engendered in small classes and an atmosphere

of comradeship in work among the students has likewise been fostered.

There have been several other factors that have tended to keep the standard of work high in these special schools. Blind students have, with few exceptions, been marked by a seriousness of purpose. They have been taught to concentrate and less distracting influences have prevailed in these schools than in the public schools. Since these were boarding schools, supervision of study has been more easily accomplished, and tardiness and absences have been held down to a minimum. Blind children have seemed to realize that most of their education must be obtained in school where they were surrounded by facilities for making it possible to them and consequently they have put forth greater effort.

In comparison with public school children the blind have suffered decidedly in two respects. Chapter Three has shown that many more blind than normal children have not been physically strong; their low health resistance has been accounted for by their lack of exercise and frequently to existing physical conditions which undermine their general health as well as impair their sight. The second disadvantage which blind children have experienced has been due rather to the organization of the schools than to inherent qualities in the children, i. e., secondary schools for the blind have been small and the opportunity for group rivalry, a necessary aid in raising standards of work,

has been practically eliminated. Thus it is seen that small classes may in some respects have been advantageous to the students, while in other ways small classes have limited opportunities.

Four important means have been found by which schools for the blind have been able to compare the standards of their work with the standards maintained in the public schools. According to the school reports, each of the schools has sent during the decade under consideration some of its graduates to higher institutions of learning. The records of these blind students attending higher institutions of learning have served as a criterion for judging the kind of work they have been doing in comparison with that of students with normal vision. Likewise, in the case of the blind students attending public schools a comparison of their work has been readily made with the students who have had no visual handicap. Schools for the blind that have been placed on the State list of accredited schools have had to maintain a standard comparable to that demanded of the accredited public schools. The fourth criterion has been a comparison of the grades made by students in schools for the blind and public schools taking State examinations.

The first criterion was the only one of the four that has been found to be common to all the schools for the blind. The excellence of academic records maintained by blind students in universities, colleges, and conservatories has

attested the thoroughness and exacting preparation attainable in schools for the blind. As one example, the grades made during the fall semester of 1931 by seven graduates of the California School for the Blind attending the University of California averaged for each one as follows: B, B, B, B, A, A, A.[1] High scholastic standing is very creditable, but care must be taken lest it be engendered by a narrow, intensive training which inadvertently is not cognizant of those factors so important to the development of an integrated personality. To offset this danger schools for the blind would do well if they bore constantly in mind their general educational objectives.

2. Examinations

There has been no uniformity in schools for the blind in the matter of examinations. There is evidence that many of the schools have conducted written examinations periodically, particularly at the close of each semester, the results of which have formed a partial basis for the determination of the students' marks for

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1. Data furnished by Dr. Newel Perry, Director of Advanced Studies at the California School for the Blind.

the courses.[1] Most of these examinations have taken the essay form rather than the objective or new-type tests so popular in the public schools to-day. A handicap in using the informal objective tests in schools for the blind has been the fact that they have involved the problem of embossing which was not as readily and inexpensively accomplished as mimeographing. The construction of informal objective tests has presumed a definite training for which many teachers of the blind have had no preparation. A third difficulty encountered has been that answers particularly to the completion and matching types of tests have been somewhat confusing, but by no means impossible, for blind students to emboss or type.

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1. _Catalogue and Announcement_ of the Texas School for the Blind, Austin, Texas, 1922-23, Austin: Von Boeckmann-Jones Co., Printers, 1922, p. 60.

   Dedicatory Number. _Catalogue and Announcement_, Texas School for the Blind, Austin, Texas, 1930-31. Austin: Von Boeckmann-Jones Co., Printers, p. 15.

   Report of the State School for the Blind and the Deaf, Raleigh, North Carolina, 1922-1924. Raleigh: Edwards and Bboughton Printing Co., 1924, p. 15.

   Report of the Tennessee School for the Blind, Sessions 1923-1925. Nashville: Printing Department Tennessee Industrial School, p. 44.

   Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 60.

Undoubtedly the strongest argument for the use of standardized objective tests in schools for the blind has been that they have offered reliable norms for measuring progress in school achievement for comparative purposes. A discussion of these tests is included in a later section.

It was found that in the New York State School for the Blind every January and June the pupils took the same Regents Examinations conducted under the auspices of the New York State Department of Education as did the students in the public schools of New York State.[1]

The students of the New York Institute for the Education of the Blind also took the Regents Examinations given by the State Department of Education.[2]

The students of the New Mexico School for the Blind took the same examinations as those sent to the public

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1. See the Annual Reports of the New York State School for the Blind for the years: 1921-1922, p. 11; 1922-1923, p. 10; 1923-1924, p. 11; 1924-1925, p. 11; 1925-1926, p. 12; 1926-1927, p. 14; 1927-1928, p. 13; 1928-1929, p. 13; 1929-1930, p. 23; and 1930-1931, p. 17.

2. See the Annual Reports of the New York Institute for the Education of the Blind for the years: 1921, p. 17; 1922, p. 17; 1923, p. 17; 1924, p. 18; 1925, p. 20; 1926, p. 18; 1927, p. 20; 1928, p. 20; 1929, p. 20; 1930, p. 20; 1931, p. 23.

schools from the State Department of Education.[1]

This is not a complete picture of the practice of examinations and tests in schools for the blind in the United States due to the wide variation in the kind and use of examinations and the lack of complete data, but sufficient evidence has been gathered to show that the use of the essay type of examination continued to be predominant in schools for the blind; that in some states blind pupils like sighted pupils were subject to state examinations; and that promotion and semester marks in some schools for the blind were determined by the results obtained from formal examinations.

3. Units and Credits

The value of units and credits seems to have been a matter determined by the various schools or authorities under whom they operated and consequently no general statement covers the procedures used in the schools for the blind collectively. A sampling will show how diverse have been the credit values and credit requirements for graduation.

The Kansas School for the Blind required sixteen credits for graduation, of which thirteen must be from

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1. Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1924, Alamogordo, New Mexico, p. 31.

the list of literary subjects.[1] The Indiana School for the Blind required sixty credits from the Literary High School Department. A credit was one-half year's work of one period of recitation daily for five days in a week, with necessary preparation.[2] In the Texas School for the Blind to obtain a diploma from the Literary Department a student must have had sixteen units of credit as follows: History and Civics...4 units; English...4 units; Mathematics (including Business Arithmetic)...3½ units; Science...1 unit; Spanish...1 unit; Typewriting...(1 unit a year for two years)...½ unit; Industry...½ unit. A unit represented five 53-minute recitations per week for a session of thirty-six weeks.[3] The Tennessee School for the Blind made sixty credit units mandatory for graduation, arbitrarily designating the number of units in various groups of subjects. The unit of credit was fixed

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1. Twenty-Sixth Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1928. Topeka: B. P. Walker, 1928, p. 13.

2. Eighty-Fourth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1930, Indianapolis, p. 19.

3. Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-31. Austin: Von Boeckmann-Jones Co., Printers, p. 16.

arbitrarily and the credit allowed for a subject, like English, that recited forty-five minutes five times per week, per term (approximately twelve weeks), and that required, at least, the time of a recitation period for study outside of the class-room each day. Subjects, like typewriting, requiring a period per day, without outside study and preparation were allowed one-third of a unit of credit, and subjects requiring two periods a day, like piano practice were allowed two-thirds of a unit of credit.[1] In the Mississippi School for the Blind students were required to make sixteen high school units for graduation.[2] In the New Mexico School for the Blind seventeen high school units were required for graduation.[3] In the California School for the Blind fifteen units beyond the eighth grade were required for graduation from the school. A unit of credit signified five forty minute recitation periods per week for one year of thirty-eight weeks, or the equivalent in recitation, field and laboratory periods.[4]

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1. Report of the Tennessee School for the Blind, Sessions 1927-1929, pp. 58-59.

2. The Biennial Report of the Trustees of the Mississippi School for the Blind, From August, 1921 to July, 1923, p. 12.

3. Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1924, Alamogordo, p. 37.

4. California School for the Blind Quarterly, I, No. 3, May, 1923, Berkeley, p. 45.

In the Louisiana State School for the Blind a total of twenty units was required for graduation from high school.[1]

Those high schools that were accredited have been compelled to arrange their programs on the standard-unit basis, which represented usually fifteen units of high school work acceptable to the colleges of the States. There was found variation from State to State in the administration of these units in both schools for the blind and in public schools.[2]

4. Certification

In some schools for the blind it has been found that a system of certification designating completed work prevailed. This did not seem to be a general practice but it occurred often enough to merit a few words of discussion. In some instances, certificates were granted to undergraduate students who had completed a specific number of units of work in any special department.[3] In other cases, certificates were issued to students graduating from high

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[1] Biennial Report, Courses of Study and Announcements of the Louisiana State School for the Blind, June 30, 1926, Baton Rouge, Louisiana, p. 14.

[2] Williams, L. A. and Rice, G. A. op. cit., p. 303.

[3] Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 60.

school who had not college credit.[1] In still other cases, certificates were granted to students who completed work in various departments in addition to their high school diploma.[2]

The chief advantages offered by the system of certification have been: a standardization of work in the

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1. *California School for the Blind Quarterly*, I, No. 3, May, 1923, Berkeley, p. 45.

   Dedicatory Number. *Catalogue and Announcement*, Texas School for the Blind, Austin, Texas, 1930-31. Austin: Von Boeckmann-Jones Co., Printers, pp. 69-73; 15.

   Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, October 1, 1926-September 30, 1928, Published by the Corporation, p. 12.

2. Perkins Institution and Massachusetts School for the Blind, Ninety-First *Annual Report* of the Trustees, 1922. Boston: Wright & Potter Printing Co., 1923, p. 23.

   Perkins Institution and Massachusetts School for the Blind, Ninety-Sixth *Annual Report* of the Trustees, 1927. Boston: Wright & Potter Printing Co., 1928, p. 27.

   Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, *Thirty-Fourth Annual Report*, 1921, p. 41.

   Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, *Forty-First Annual Report*, 1928, p. 23.

   Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1924, Alamogordo, p. 23.

   Report of the Board of Trustees of the Colorado School for Deaf and Blind For the Year Ending June 30, 1925, Colorado Springs: Printed at the School, p. 9.

   Report of the Board of Trustees of the Colorado School for Deaf and Blind For the Year Ending June 30, 1926, Colorado Springs: Printed at the School, p. 38.

several departments of the school, and a recognition of work accomplished by students, especially where a diploma has not been earned.

5. Schools Accredited to the University

Following the trend of the public schools, in many States schools for the blind have been also on the State list of accredited high schools. The subsequent schools specifically stated in their reports that they maintained four-year accredited high schools: South Dakota School for the Blind,[1] Kansas School for the Blind,[2] Iowa School for the Blind,[3] North Carolina School for the Deaf and the Blind,[4] Idaho School for the Deaf and the Blind,[5] Indiana School for the Blind,[6] Wisconsin School for the

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[1] Sixteenth Biennial Report of the Superintendent of the South Dakota School for the Blind For the Biennial Period Ending June 30, 1930, pp. 4; 9.

[2] Twenty-Seventh Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1930. Topeka: B. P. Walker, State Printer, 1930, p. 6.

[3] The Iowa School for the Blind, Vinton, Iowa, p. 5.

[4] Report of the State School for the Blind and the Deaf, Raleigh, North Carolina, 1922-1924. Raleigh: Edwards and Bboughton Printing Co., 1924, p. 16.

[5] Biennial Report of the Idaho State School for the Deaf and Blind, 1925-1926, Nineteenth and Twentieth Years, p. 18.

[6] Eightieth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind for the Fiscal Year Ending September 30, 1926, Indianapolis, p. 11.

Blind,[1] New York State School for the Blind,[2] Texas School for the Blind,[3] Florida School for the Deaf and the Blind,[4] South Carolina School for the Deaf and the Blind,[5] the Western Pennsylvania School for the Blind,[6] Kentucky School for the Blind,[7] and the Ohio State School for the Blind.[8] The North Carolina School for the Deaf and the Blind mentioned that their high school was not only on the State list of accredited high schools, but also on the list of the Southern Association of Colleges and Secondary Schools.[9]

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1. Twentieth Biennial Report of the Wisconsin School for the Blind for the Biennial Period Ending June 30, 1922, Janesville, p. 201.

2. Fifty-Eighth Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, For the Year 1925-1926. Albany: J. B. Lyon Company, Printers, 1926, pp. 13-14.

3. Dedicatory Number. Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-31. Austin: Von Boeckmann-Jones Co., Printers, p. 2.

4. Florida State School for the Deaf and the Blind, Saint Augustine, President's Biennial Report 1928-1930, p. 17.

5. Seventy-Fourth Annual Report of the South Carolina School for the Deaf and the Blind, Cedar Spring, 1922. Columbia: Gonzales and Bryan, State Printers, 1923, p. 16.

6. "In 1928 the State Department of Public Instruction certified our High School as a properly accredited High School." Quoted from a letter from the Superintendent to the author.

7. Outlook for the Blind, 26:55 (March, 1932).

8. "Ohio," Outlook for the Blind, 17:38 (September, 1923).

9. State School for the Blind and the Deaf, Raleigh, North Carolina, 1928-1930, p. 9.

Apparently, the accrediting system has had a definite tendency to raise and maintain high standards of instruction in schools for the blind and furthermore, it has developed a degree of articulation between these secondary schools and the institutions of high learning. It has also served the purpose of linking these special schools with more expansive institutions and has thus given them the benefits of extra mural relationships.

The prime objection to this system in relation to schools for the blind seems to have been, however, that too extensive a program of studies was required for the limited high school enrollment and this did not allow for the intensive training so often needed by the pupils in these schools.

6. Auxiliary School Agencies

a. Attendance at Local Public High Schools.

An adequate, if not superior substitution for the accrediting system in schools for the blind, has been the practice of sending certain qualified students to local public high schools for at least their junior and senior years, and of granting to them the privilege of residing at the institution for the blind during this period of extra mural schooling. As an account of this practice occurs elsewhere, no further discussion is necessary at this point.[1]

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[1] See pages 16-19

b. Evening School.

Within the last ten years another type of educational experiment has been tried. During the year 1922 the Western Pennsylvania School for the Blind held an evening school in order that a few of its former pupils might avail themselves of the opportunity of returning to finish the work of the Literary Department which was incomplete when, for various reasons, they left school.[1]

c. Exchange of Pupils.

In order to broaden the interests and to enrich the experiences of students whose lives might become cramped from too long a period within the confines of one school, Perkins Institution, the Pennsylvania Institution at Overbrook, and the Connecticut School at Hartford have at times exchanged one or two pupils a year. This practice has been unique to these schools, but its prospects are worthy of investigation.[2]

d. Summer School.

The Pennsylvania Institution for the Instruction of the Blind organized a summer school in 1922 which gave to thirteen children of both sexes primary work for a period of six weeks.

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1. Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fifth Annual Report, 1922, p. 24.

2. Perkins Institution and Massachusetts School for the Blind, Ninety-Second Annual Report of the Trustees, 1923. Boston: Wright & Potter Printing Co., 1924, p. 19.

For the mornings regular class work, literary and manual, was scheduled and the afternoons were devoted to directed play. The summer school has been held each summer since that time with provisions made to accommodate the increased enrollments. Children have attended these summer sessions for varying reasons, but the majority of them have come to make up work previously deficient. Although the personnel of the summer school was composed originally predominately of younger pupils and even some beginners, the scope of these sessions became extended in 1924 in order "to offer opportunities for useful employment to a selected few of the older boys." These boys spent a good share of their time in poultry work and in the caning department. In time arrangements were made for several of the high school girls to assist as pupil teachers in the primary department which has been the means of offering excellent training to these students.[1] In addition a few selected students have been allowed to maintain residence at the school while attending summer session at a higher institution of learning in Philadelphia.[1]

Without doubt this innovation is a decidedly progressive movement. It has not only provided for the group of children during the summer whose home life was inadequate, but it

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1. See the Annual Reports of the Pennsylvania Institution for the Instruction of the Blind for the years: 1922, p. 26; 1924, pp. 17-18; 1925, pp. 25-27; 1926, p. 20; 1927, pp. 21-22; 1930, pp. 19-20.

furnished opportunity for mental and manual development for a larger group of children who for various reasons needed the extra training made possible by the summer sessions.

O. H. Burritt, the principal, further justified the summer session thus:

> So far as the little group at the kindergarten is concerned the manifold problems concerned in the training of these children should not be interrupted for one-fourth of the school year. And an educational plant representing an initial investment in excess of half a million dollars wholly idle for one-fourth of the year, involves educational waste that we cannot afford to incur.[1]

As an experiment in 1927 the New York Institute for the Blind held an eight weeks summer school session with sixteen boys, advanced pupils of the school, in attendance. Literary and manual work was pursued in the morning, while the afternoons and evenings were given over to recreation.[2] The plan was so successful that each successive year, with the exception of the summer of 1930, similar arrangements have been made.[3]

In 1928 two new features were added which have had splendid results. The enrollment was extended to include girls as well as boys, and also invitations were sent to

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1. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Second *Annual Report*, 1924, p. 18.

2. *Year-Book* of the New York Institute for the Education of the Blind, Ninety-Fifth Year, 1927. New York: The Bradstreet Press, pp. 35-40.

3. *Year-Book* of the New York Institute for the Education of the Blind, Ninety-Eighth Year, 1930. New York: Charles Francis Press, p. 27.

the New York State School at Batavia, Perkins Institution, the Connecticut School at Hartford, and the Pennsylvania Institution at Philadelphia asking these institutions to send a limited number of their students to participate in the offerings of the summer school. The success of the enterprise was instantly realized. It meant an experience both educating and socializing to each boy and girl.[1]

This undertaking has been so broadening in its influence on blind boys and girls and suggests such boundless opportunities for blind students likewise in other parts of the country that the complete account of the 1931 session is quoted in order to give a clear conception of its organization and administration.

> Nineteen of the boy pupils of the Institute were enrolled for the summer session to take on advanced work, to make up some losses, or to serve some special need. With these assembled thirteen boys from other schools, invited to join ours for these six weeks of study and recreation. Two each were sent from Perkins Institution, the Connecticut School, the New York State School, Overbrook, and the Maryland School, and three from the Pittsburgh School. The mornings were spent in study and practice, the afternoons and evenings in jaunts to places of interest, or in physical exercise of one sort or another. Classes were conducted in Elementary Algebra, Plane Geometry, High School English I, II, III and IV, Latin, Arithmetic,

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[1] Year-Book of the New York Institute for the Education of the Blind, Ninety-Sixth Year, 1928. New York: The Bradstreet Press, pp. 37-40.

Year-Book of the New York Institute for the Education of the Blind, Ninety-Seventh Year, 1929. New York: Charles Francis Press, pp. 37-38.

> Geography, Reading, Spelling, Typewriting, Organ and Piano. Among the sights of New York seen by these students may be mentioned: The Statue of Liberty, the American Museum of Natural History, Kensico and Croton Dams and the water aeration basin, the Holland Tunnels, the Steamship "Europa," the National Broadcasting Company's studio, the New York "Times" printing plant, and the observatories of the Empire State Building, highest in the world. Most memorable, perhaps, was a trip to Roosevelt Field where the pupils were instructed in the mechanics of flight by airplane and given the thrilling experience of a brief trip in the air. Besides, many places in the common knowledge of New York residents but not so well known to blind boys either of New York or elsewhere were visited and their significance explained by teachers in charge of groups, such as the great railway stations, the art galleries, Broadway, a well-known department store, Fifth Avenue, the Public Library, an Automat.
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> One day each week every boy had a swim in the pool of the Bronx Union Y. M. C. A. Twice each week parties attended concerts of the New York Philharmonic Society at the Lewisohn Stadium. Each Friday afternoon an athletic contest was held on the Institute's field before the customary home-going of the local boys for the week-end.[1]

These four auxiliary school agencies are still in the stage of experimentation, but the results that have materialized, particularly in the case of attendance at local public high schools and at summer schools indorse the schemes and presage future opportunities that should be enticing to all residential schools for the blind.

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[1] Year-Book of the New York Institute for the Education of the Blind, Ninety-Ninth Year, 1931. New York: Charles Francis Press, pp. 36-37.

7. Tests and Measurements

In order to understand the extent to which tests and measurements have been used in schools for the blind, it is essential to have a knowledge of the history of the movement as it is germane to these schools. Mental testing was introduced into the schools for the blind approximately a decade later than into the public schools. In 1914 Robert B. Irwin worked with Dr. Goddard of Vineland on a preliminary series of tests which were an adaptation of the Binet scale.[1] These tests were used by the former to measure the intelligence quotients of a number of blind children of various ages.[2]

In 1915 Dr. T. H. Haines at the instigation of Mr. Irwin gave mental tests to two hundred and twenty-four pupils of the Ohio State School for the Blind.[3] A year later he published an account of his use of the year scale and presented a revision of the Yerkes Point Scale

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1. Hayes, S. P. "Mental Tests: a General Survey of the Field," American Association of Instructors of the Blind. Proceedings of the Twenty-Seventh Biennial Convention Held at Watertown, Massachusetts, June 23-27, 1924, p. 136.

2. Hayes, S. P. "Ten Years of Psychological Research in Schools for the Blind." Publications of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, No. 4, January, 1927, p. 7.

3. Haines, T. H. "A Psychological Survey of the Ohio State School for the Blind," Outlook for the Blind, 9:88 (Winter Number, 1916).

which could be used with the blind.[1] Simultaneously Dr. W. B. Drummond was giving tests to pupils in schools for the blind in Great Britain. In 1920 he published a Binet Scale for the Blind and a Provisional Point Scale for the Blind.[2]

In 1917 Dr. Hayes experimented with several educational tests at the Pennsylvania Institution and after certain modifications were made, they were used in the Perkins Institution and the New York State School for the Blind.[3] The Pressey Group Point Test which was modified for use with the blind was used to test the pupils in eight eastern schools for the blind during the years 1919-20.[4] Both individual and group tests were given to these children.[5]

By 1923 more than 1200 pupils in schools for the blind had been tested and the next move was an attempt to standardize these tests which was subsequently undertaken

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1. Hayes, S. P. "Ten Years of Psychological Research in Schools for the Blind." Publications of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, No. 4, January, 1927, p. 7.

2. Ibid., p. 7.

3. Ibid., p. 5.

4. Hayes, S. P. "Mental Tests: a General Survey of the Field." American Association of Instructors of the Blind. Proceedings of the Twenty-Seventh Biennial Convention, Held at Watertown, Massachusetts, June 23-27, 1924, p. 136.

5. Allen, E. E. "Special Features in the Education of the Blind during the Biennium 1918-1920," Bulletin, 1921, No. 16, Bureau of Education. Washington: Government Printing Office, 1921, p. 13.

and they were put into usable form in a guide prepared by Dr. Hayes.[1] The revision of the tests made by Dr. Hayes has made it possible to measure all the pupils in schools for the blind and to compare them with sighted children of the same ages.[2]

Between the years 1917 and 1927 mental tests were given under the direction of Dr. Hayes in the following schools: The Pennsylvania Institution for the Instruction of the Blind, Perkins Institution and Massachusetts School for the Blind, Maryland School for the Blind, Connecticut School for the Blind, Western Pennsylvania School for the Blind, New York State School for the Blind, Florida School for the Deaf and the Blind, Kentucky School for the Blind, Virginia School for the Blind, Missouri School for the Blind, Indiana School for the Blind, and the North Carolina School for the Deaf and Blind.[3]

The California School for the Blind undertook a testing program in 1922 under Dr. R. H. Franzen, Consulting Psychologist.[4] The benefits derived from this testing have formed a partial basis for admission of children to the

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1. Hayes, S. P. "Ten Years of Psychological Research in Schools for the Blind," Publications of the Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, No. 4, January, 1927, p. 8.

2. Ibid., p. 8.

3. Ibid., p. 8.

4. First Biennial Report of the California School for the Blind for the Twenty-Four Months Ending June 30, 1924, p. 15.

school and furthermore, the results have indicated the need of a flexible system of grading and promotion.[1]

The new pupils at the New York State School for the Blind have been given the Binet-Simon mental tests each year.[2] As an example of the findings, the following is quoted from the catalogue for the year 1930-31.

> Nineteen new pupils given Binet-Simon tests are classified as follows:[3]

Over 100	4
90 to 100	6
80 to 90	5
70 to 80	2
Below 70	2
Total	19

The value of these annual tests is certified by the following statement:

> An analysis of the results of these tests during the past six years shows that they furnish a forecast which is 92 per cent correct of the probably future school progress of the pupils.[4]

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[1] California School for the Blind, Third Biennial Report for the Period Ending June 30, 1928, p. 12.

[2] See the Annual Reports of the New York State School for the Blind for the years: 1923-1924, p. 12; 1924-1925, p. 11; 1925-1926, p. 13; 1926-1927, p. 14; 1927-1928, p. 13.

[3] Sixty-Third Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1930-1931, New York: Burland Printing Co., 1931, p. 17.

[4] Fifty-Sixth Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1923-1924. Albany: J. B. Lyon Co., Printers, 1925, p. 12.

The pupils of the Kansas School for the Blind were tested in 1928 in order to assist them in planning for their future work. Quoting from the report made by the Department of Psychology, Kansas University:

> During March and April 1928, the Stanford Revision of the Binet-Simon Intelligence Tests was given to the students at the State School for the Blind by three advanced students from the Department of Psychology at the University of Kansas. The main purpose of the survey was to obtain further information regarding the general abilities of the students with a view to advising them about their future studies and work. Several were found who undoubtedly could profit very little from any sort of academic training. Others showed much more than average ability, equal indeed to that necessary for success in the so-called learned professions. The great majority of the students are thoroughly capable of benefiting from the training offered in the State School....[1]

Again during the years 1929 and 1930 the Kansas pupils were given the Hayes and the Stanford revision of the Binet-Simon Intelligence Tests and the findings were grouped under Chronological Age, Mental Age and Intelligence Quotient. The superintendent said:

> This has given us information which will be invaluable in aiding us in advising students regarding courses of study, and especially the future career.[2]

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1. Twenty-Sixth Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1928. Topeka: B. P. Walker, State Printer, 1928, p. 19.

2. Twenty-Seventh Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1930. Topeka: B. P. Walker, State Printer, 1930, p. 8.

Perkins Institution has made practical use of the results obtained from the testing program started in that school in 1916. As an outcome of the findings Dr. Allen said:

> ....we have already modified our pupil classification, regrouping them not only according to capacity but according to rate of accomplishment.[1]

Again Dr. Allen spoke of the assistance rendered by the tests given to the pupils in the Perkins Institution as follows:

> To be able to measure with some definiteness both the capacity and bent of school pupils has assisted teachers in classification, in curriculum making and in adapting this or that school pursuit to the individual boy or girl. In other words, by conserving time, energy and patience in pupil and teacher alike it has made our teaching more a science than formerly. We now test every child on entrance and begin his education with reasonable confidence as to result. In a school of our sort such advance knowledge has become invaluable. Also by collecting and charting the data over periods of time and by comparing these with similar findings made in other kinds of schools we can better comprehend our own problems and struggle the more intelligently to overcome them through special emphasis rather than through following in traditional grooves....[2]

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1. Perkins Institution and Massachusetts School for the Blind, Ninety-First Annual Report of the Trustees, 1922. Boston: Wright and Potter Printing Co., 1923, pp. 24-25.

2. Perkins Institution and Massachusetts School for the Blind, Ninety-Sixth Annual Report of the Trustees, 1927. Boston: Wright and Potter Printing Co., 1928, pp. 18-19.

Referring to the mental tests and educational measurements that were conducted at the Western Pennsylvania School for the Blind in 1920-1921, the superintendent stated:

> Through these tests we have been able to discover a number of weak points in our methods of teaching and these have been rectified.[1]

General intelligence tests were given in 1926 to the pupils of the Missouri School for the Blind in order to find out their native ability. The following tests were given: Pressey Group Point Scale number 1 Rote Memory, Pressey Group Point Scale number 5 Logical Memory, Pressey Cross Out Scale Test number 4 Moral Judgment, Pressey Cross Out Scale number 4 Logical Judgment, Pressey Cross Out Scale number 1 Verbal Ingenuity, Pressey Group Point Scale number 10 Analogies, Pressey Group Point Scale number 4 Opposites, Pressey Group Point Scale number 3 Arithmetic, and Ayers Spelling Test.[2]

The Pennsylvania Institution for the Blind, one of the two earliest schools for the blind to manifest an interest in educational measurements[3] after nine years of research

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1. Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fourth Annual Report, 1921, p. 41.

2. Thirty-Fifth Biennial Report of the Missouri School for the Blind for the Fifty-Fourth General Assembly, January 1, 1927, pp. 13-16.

3. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Third Annual Report, 1925, p. 79.

work confidently stated:

> While the precise value of research studies in schools for the blind will not be known until the results have stood the test of use and further critical study, it is generally admitted that in these studies we are making definite contributions in our special field to educational progress in this country. There is little question that in after years Overbrook will point with pride to its contribution to progress in the education of the blind through the medium of the measurement of intellectual abilities and attainments and of vocational interests and capabilities.[1]

Among the group test with adaptations that have been used with blind children are: Pressey Group Point Scale, Seashore Test, Pyle and Whipple Rote Memory Tests, Courtis Silent Reading Tests, Starch Silent Reading Test, Ayres Spelling Scales, Starch Spelling Scale, Courtis Standard Research Test in Arithmetic, Hillegas-Thorndike Scale, Trabue Completion Test Language Scales and Starch Grammatical Scales.[2]

In 1921 Dr. Hayes prepared a manual entitled "Self-Surveys in Schools for the Blind" which has been of great service to teachers in giving the group tests adapted to blind children.[3]

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1. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Third _Annual Report_, 1925, p. 21.

2. Hayes, S. P. "The Work of the Department of Psychological Research at the Pennsylvania Institution for the Instruction of the Blind, Overbrook," _Outlook for the Blind_, 14:11-19 (Spring Number, 1920).

3. Hayes, S. P. "Self-Surveys in Schools for the Blind," _Outlook for the Blind_, 15:1-59 (Winter Number, 1921).

This publication was followed by the Guide which gave information concerning measuring by means of the Binet tests which also were adapted for use with blind children.[1] By 1925 both the Manual and the Guide had been requested by one-half of the residential school for the blind in the United States.[2]

The exact number of schools for the blind that have made use of educational tests, including intelligence test and achievement tests, has not been possible to ascertain. The assumption is that there has been testing to some extent in more of the schools than the data seem to indicate. Notwithstanding the fact that our knowledge is not complete with respect to twenty-one schools, and that schools for the blind began ten years later than public school to take an active interest in testing, it can be claimed without fear of contradiction that a real interest has developed among schools for the blind in objective methods of measuring education attainment and this interest has been substantiated by educational progress wherever a testing program has been adopted.

IV. Summary

It has been pointed out in this chapter that the residential schools for the blind included in this study

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1. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-First Annual Report, 1923, pp. 38-39.

2. The Pennsylvania Institution for the Instruction of the Blind, Overbrook, Philadelphia, Ninety-Third Annual Report, 1925, p. 77.

were not custodial institutions to which blind children were committed for a term of years, but they were in a very real sense schools whose organization and administration were conducted in accordance with definitely established educational principles.

The management of the forty-two residential schools for the blind was found to be under the direction of boards of control which varied considerably with respect to: name, number of members, term of office of the members, and the manner of appointing the members. So great a variation was found to exist relative to the tenure of office of the superintendents in these institutions that no conclusions could be drawn. Each of the schools maintained a staff consisting of both men and women who conducted the work of the various departments.

It was shown that in an increasing number of instances these schools were being officially recognized as a part of the educational system of the States and the States have felt it incumbent upon them to make the necessary provisions in their behalf in such matters as: support, compulsory education laws, scholarships for higher education, and the construction and maintenance of school plants.

These schools were found to be located in cities, suburbs, and in rural sections and for the most part possessed extensive grounds which accommodated their several buildings. The newer plants have been built according to the cottage or modified cottage system, while the early buildings were constructed to be used for the congregate type of housing. The equipment

in these schools varied in extent and condition, and in some instances, the lack of suitable equipment was found to be retarding educational progress.

The teaching force in secondary schools for the blind showed evidence of a limited preparation, a rather small proportion with academic degrees, a lack of experience in teaching above the senior high school grades, and a somewhat meagre experience in foreign travel. On the other hand there was evidence that with few exceptions these teachers held credentials which qualified them to teach in their respective positions and that they showed a keen interest generally in professional advancement, especially by attending summer schools and by taking extension courses.

The largest proportion of teachers in schools for the blind was found to be sighted and there was a much larger number of women than men instructors. Approximately half of the teachers resided at the schools and thus maintenance was furnished as a part of their monthly compensation.

Enrollments in secondary schools for the blind were comparatively small; the largest number of students in the high school grades in these schools for a given year was slightly more than 1200, and the total enrollment for the same year was approximately 5000 students.

Varying degrees of blindness were discovered among the students in these special institutions, but broadly speaking, one half of the student population was totally blind and the other half had partial vision. In fact, nearly one-half of

the students with partial vision were able to read ordinary print to some extent.

The students in the junior and senior high schools for the blind were considerably older than the ages regarded as normal for public school children, but this discrepancy was due to retarded opportunities rather than to mental deficiency.

The length of class periods in secondary schools for the blind was comparable to the practices in this respect in the public schools. Schools for the blind were found in general to have a nine months school year with a summer vacation lasting three months, a two weeks Christmas recess, and occasional holidays on special days.

There was evidence that a large number of secondary schools for the blind still retained the traditional type of organization composed of four-year high schools consisting of grades nine to twelve inclusive. Six schools were organized on the 6-3-3 plan.

No uniformity in administrative practices such as: examinations, units and credits, certification, schools accredited to the university, and auxiliary school agencies seemed to exist. In at least half of the schools some sort of a mental and achievement testing program had been adopted with results that have justified a more extended use of tests and measurements than has been the practice.

Chapter Five

Curricula and Methods

I. Curricula

1. Types of Studies

It is regrettable that the programs of studies for only thirteen residential schools for the blind could be procured and consequently this investigation has of necessity been limited to analysis and study of this restricted number. Nevertheless, certain tendencies and practices have been brought to light by means of the material at hand that have real significance and it is probable that these data are suggestive of what might be found in the remaining schools. Only the most recent program of study published by each school has been used in this study and in no case has reference been made to one published in a catalogue earlier than 1921. At the time of this investigation the junior high school organization existed in only a limited number of schools for the blind and where it was found, it was begun at so recent a date that little can be said about the junior high school programs of study.

The programs of studies in schools for the blind during

the decade 1921-1931 were with noticeable unanimity designed for intensive training and they provided opportunities for training in four departments: "literary or academic," "music,""industrial or vocational," and "physical education." Generally the high school department consisted of grades nine to twelve inclusive, but such variations as grades eight to eleven inclusive, nine to thirteen inclusive, and nine to ten inclusive were found to exist, as will be evident in the more detailed treatment.

The subsequent discussion has confined itself first to the literary curriculum as found in the thirteen residential schools for the blind followed by a more general treatment of the music, industrial, and physical education curricula of all the residential schools for the blind.

a. Literary Department

The programs of studies that have been used in this investigation with reference to the literary curriculum have been classified as follows: "Group One" which constitutes programs of studies of four schools that listed only the subjects and the years in which they were taught; "Group Two" which embraces programs of studies of five schools that listed subjects, years in which they were taught, and the textbooks used; "Group Three" which included the programs of studies of four schools that presented the subjects, years in which they were taught, the textbooks used, and the objectives.

Group One. Group One includes the programs of studies published by the Iowa School for the Blind,[1] the Kansas School for the Blind,[2] the Louisiana State School for the Blind,[3] and the North Dakota School for the Blind.[4] As only the lists of subjects taught in each year of the high school were presented, no complete analysis could be made of the curriculum construction in each of the respective schools. Nevertheless, Table XLIV, which is a composite of the four preceding programs of studies, indicates several significant points of similarity as well as of differences in practice in these schools.

In the Kansas School the first year of high school work began with the ninth grade and in the Louisiana School the first year of high school began with the eighth grade; the fourth year of high school work was taken in the twelfth grade in the former case, but in the eleventh grade in the latter. Both the Iowa School for the Blind and the North Dakota School for the Blind had five-year high school curricula which allowed for more extensive and intensive training with less crowded pupil schedules.

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1. The Iowa School for the Blind, Vinton, Iowa, 1929-1930, [p. 6].

2. Twenty-Sixth Biennial Report of the Kansas School for the Blind, Kansas City, For the Two Years Ending June 30, 1928. Topeka: B. P. Walker, State Printer, 1928, pp. 11; 13.

3. Biennial Report, Courses of Study and Announcements, Louisiana State School for the Blind, June 30, 1926, Baton Rouge, pp. 13-14.

4. The Eleventh Biennial Report of the Superintendent of the North Dakota School for the Blind, For the Biennial Period Ending June 30, 1928, pp. 14-15.

Table XLIV shows the academic subjects that were offered in these four high schools and the years in which they were offered. In some cases a general term was used to designate a course, as for instance English, while in other cases the specific branches of English offered were given. It must be understood that wherever numbers are given in Columns I, II, III, IV, and V they signify the total number of subjects offered by the four schools and do not necessarily mean the number of schools offering the courses (although this is often the case); for example, two languages may have been taught in one school in one year and no language may have been taught during the same year in the other three schools.

Table XLIV shows the following facts with regard to the academic subjects offered in the four above mentioned schools. The figures after the names of the courses indicate the number of times the subjects were offered in the various years of the four high schools.

English.--First year: English, 3; literature, 1; rhetoric, 1; composition, 1; spelling, 1. Second year: English, 2; literature, 2; rhetoric, 1; grammar, 1. Third year: English, 2; literature, 2; rhetoric, 1; composition, 1. Fourth year: English, 2; literature, 2; composition, 2. Fifth year: English, 1; literature, 1.

The emphasis is seen to have been on literature, although the term English may have included literature, rhetoric, composition, spelling, and grammar.

Social Studies.--First year: general history, 1; Second year: general history, 1; ancient history, 2; civics, 1. Third year: ancient history, 1; modern history, 2; mediaeval history, 2; English history, 2; civics, 1; economics, 1; psychology, 1; salesmanship, 1. Fourth year: modern history, 1; mediaeval history, 2; American history, 2; civics, 2; psychology, 1; sociology, 1; commercial law, 1. Fifth year:

Table XLIV. The Literary Courses Offered in the Four Senior High Schools of Group One and the Years in Which They Were Taught

	High School Years				
Courses	I	II	III	IV	V
English	3	2	2	2	1
Literature	1	2	2	2	1
Rhetoric	1	1	1		
Composition	1		1	2	
Spelling	1				
Grammar		1			
Social Studies					
History					
General	1	1			
Ancient		2	1		
Mediaeval			2	2	
Modern			2	1	
American				2	2
English			2		
Civics		1	1	2	2
Economics			1		
Psychology			1	1	2
Sociology				1	
Salesmanship			1		
Commercial Law				1	
Mathematics					
Algebra	4	3			
Geometry		2	3	1	
Commercial Arithmetic	1				
Physical Science					
Elementary	1				
Physical Geography	3				
General		1		1	1
Physiology	1		1		
Chemistry			1	1	
Physics				2	1
Foreign Language					
Latin	1	1	2	2	
French			1	1	
Typewriting	1	1	1	2	2

American history, 2; civics, 2; psychology, 2.

Very little history was offered in the first and second years of these schools; it was postponed for the third and fourth years which offered seven and five courses respectively. Other phases of the social studies with the exception of civics did not play any considerable part in the high school curricula of these four schools for the blind.

Mathematics.-- First year: algebra, 4; commercial, 1. Second year: algebra, 3; geometry, 2. Third year: geometry, 3. Fourth year: geometry, 1.

Algebra was taught in each school during the first year. No mathematics was offered in the fifth year.

Physical Science.-- First year: elementary, 1; physical geography, 3; physiology, 1. Second year: general, 1. Third year: physiology, 1; chemistry, 1. Fourth year: general, 1; chemistry, 1; physics, 2. Fifth year: general, 1; physics, 1.

A variety of physical sciences was offered with no particular emphasis on any one except physical geography.

Foreign Language.-- First year: Latin, 1. Second year: Latin, 1. Third year: Latin, 2; French, 1. Fourth year: Latin, 2; French, 1.

The courses in foreign languages were offered most frequently in the third and fourth years, while none was offered in the fifth year. The traditional subject of Latin still retained a popularity in these schools.

Typewriting.-- First year: typewriting, 1. Second year: typewriting, 1. Third year: typewriting, 1. Fourth year: typewriting, 2. Fifth year: typewriting, 2.

In the four schools of the blind under Group One the curricular emphasis was on English and Social Studies, particularly History. Mathematics and Physical Science were

given practically equal stress and foreign languages received small attention. The presence of psychology in these high school curricula was a relic of the time when psychology was a high school subject rather than a college subject as it became later. Typewriting was of extreme importance to the blind and the fact that it was seldom listed was probably not because it was not taught, but because it was included in the vocational curriculum instead of in the academic curriculum.

Group Two.

The courses of study of the following five schools constitute Group Two: Arkansas School for the Blind,[1] Indiana School for the Blind,[2] Maryland School for the Blind,[3] North Carolina State School for the Blind and the Deaf,[4] and the Western Pennsylvania School for the Blind.[5] In addition to

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1. Report of the Arkansas School for the Blind, 1929-1930, pp. 15-16.

2. Eighty-Fourth Annual Report of the Board of Trustees and Superintendent of the Indiana School for the Blind, For the Fiscal Year Ending September 30, 1930, Indianapolis, pp. 19-20.

3. Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of The Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 17.

4. State School for the Blind and the Deaf, Raleigh, North Carolina, 1928-1930, pp. 29-30.

5. Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-Second Annual Report, 1929, pp. 36-38.

[illegible] practically [illegible] any [illegible] all alteration. The presence of [illegible] in the [illegible] l curricula was a ratio of the same [illegible] l school subject rather than [illegible] er. Specializing use of [illegible] fact that it was seldom listed was probably not because it [illegible] but because it was included in the [illegible] icular instead of in the academic curriculum.

[illegible]

The courses of study of the following [illegible] Group Two [illegible] School [illegible] State School for the Blind and [illegible]

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1. Report of the Arkansas School for the Blind, 1928-1930, p. 15-16.

2. Thirty-Fourth Annual Report of the Board of Trustees and Superintendent of the [illegible] School for the Blind [illegible]

3. Annual Report, Thirty-Fourth and Thirty-Fifth Annual Reports of the Board of Directors of the [illegible] School [illegible] p. 17.

4. [illegible] School for the Blind and the Deaf, [illegible] 1928-1930, pp. 28-30.

5. Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, [illegible]

enumerating the subjects taught in the literary curricula with respect to grades, the programs of studies of these five schools specified the textbooks employed, and in a few instances the amount of work to be covered in a given year. The extent of the courses offered by these schools in grades nine, ten, eleven, and twelve is to be found in Table XLV.

It should be noted that the high school department of the Maryland School for the Blind was limited to grades nine and ten, and the high school department of the North Carolina School for the Blind and Deaf did not include grade twelve. Therefore the data for grade eleven have been obtained from the programs of studies of four schools, and the data for grade twelve from three schools.

Table XLV shows the following facts with regard to the academic subjects offered in the five above mentioned schools. The figures after the names of the courses indicate the number of times the subjects were offered in the various years of the five high schools.

English.-- Ninth grade: literature, 5; rhetoric, 1; composition, 4; spelling, 1; grammar, 1. Tenth grade: literature, 5; rhetoric, 4; composition, 4. Eleventh grade: literature, 4; rhetoric, 3; composition, 3; Business English, 1. Twelfth grade: literature, 3; rhetoric, 2; composition, 3.

Spelling and grammar as individual subjects were barely recognized.

Social Studies.-- Ninth grade: ancient history, 4; civics, 2; economics, 1. Tenth grade: ancient history, 2; mediaeval history, 2; modern history, 3; economics, 1; salesmanship, 2;

Table XLV. The Literary Courses Offered in the Five Senior High Schools of Group Two and the Grades in Which They Were Taught

Courses	Grades			
	9	10	11	12
English				
Literature	5	5	4	3
Rhetoric	1	4	3	2
Composition	4	4	3	3
Spelling	1			
Grammar	1			
Business English			1	
Social Studies				
History				
Ancient	4	2		
Mediaeval		2	1	
Modern		3	1	
American			1	1
English				1
Civics	2		1	1
Economics	1	1	1	
Psychology				2
Sociology			1	
Salesmanship		2	1	
Business Law		1	1	
Mathematics				
Algebra	5	1		
Plane Geometry		4	1	
Solid Geometry			1	1
Commercial Arithmetic		1	1	
Physical Science				
General	2	1	1	
Geology				2
Physiology			1	
Physics		1	1	
Foreign Language				
Latin	5	4	2	
French	1	2	2	1
Typewriting	2	2	2	2

business law, 1. Eleventh grade: mediaeval history, 1; modern history, 1; American history, 1; civics, 1; economics, 1; sociology, 1; salesmanship, 1; business law, 1. Twelfth grade: American history, 1; English history, 1; civics, 1; psychology, 2.

Ancient history was exclusively a ninth and tenth grade course in these schools. Only two schools offered a course in American history in the high school, and only one or two offered courses in English history, psychology, sociology and business law.

Mathematics.-- Ninth grade: algebra, 5. Tenth grade: algebra, 1; plane geometry, 4; commercial arithmetic, 1. Eleventh grade: plane geometry, 1; solid geometry, 1; commercial arithmetic, 1. Twelfth grade: solid geometry, 1.

Algebra was distinctly a ninth grade course while plane geometry was most frequently taught in the tenth grade.

Physical Science.-- Ninth grade: general science, 2. Tenth grade: physics, 1; general science, 1. Eleventh grade: physics, 1; general science, 1; physiology, 1. Twelfth year: geology, 2.

The physical sciences did not receive attention to any appreciable extent in these schools.

Foreign Language.-- Ninth grade: Latin, 5; French, 1. Tenth grade: Latin, 4; French, 2. Eleventh grade: Latin, 2; French, 2. Twelfth grade: French, 1.

Only two foreign languages were offered; namely, Latin and French, with emphasis on Latin.

Typewriting.-- Ninth grade: typewriting, 2. Tenth grade: typewriting, 2. Eleventh grade: typewriting, 2. Twelfth grade: typewriting, 2.

In the ninth grade English literature, algebra, and Latin were the only courses common to all the five schools. Composition and ancient history were ninth grade subjects in

four schools. In the tenth grade English literature was the only course taught by the five schools, while rhetoric, composition, plane geometry, and Latin were taught in four schools. English literature was taught in the eleventh grade in the four schools and in the twelfth grade in three schools.

Ancient history and mediaeval and modern history were offered more frequently than either American or English history. The other phases of the social studies received much less emphasis.

Physical sciences were given little attention in these schools. Algebra and plane geometry were important ninth and tenth grade subjects. Latin was emphasized in the ninth and tenth grades, and French was taught in only two schools.

Typewriting was mentioned by only two schools and hence the supposition is that it was considered a subject of the industrial department rather than that it was not offered above the elementary grades.

It would appear in cases where the programs of studies published in the school reports merely indicated the subjects taught, the grades, and the textbooks used, that these schools were thinking in terms of subject matter, i. e., of a body of information to be mastered as such. Since they did not state objectives and activities and did not outline their materials, it would seem that they were textbook minded.

Group Three. The four schools that comprise Group Three;

namely, the California School for the Blind,[1] the Mississippi School for the Blind,[2] the Tennessee School for the Blind,[3] and the Texas School for the Blind[4] all published programs of studies which included the subjects taught in each grade, the textbooks used in each grade, and, in outline form, details of the work offered in the school. These programs of studies were useful as guides to the teaching staff. The aims and methods that were outlined were in no measure arbitrary but were rather suggestive to the teachers who were allowed a reasonable amount of freedom to accomplish constructive work.

It is somewhat difficult to compare the work of the four schools with respect to grades, since the California School for the Blind and the Tennessee School for the Blind maintained junior high school departments and therefore their senior high

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1. California School for the Blind, Third Biennial Report, for the Period Ending June 30, 1928. Berkeley, California: Printed by the Class in Printing, California School for the Deaf, pp. 12-36.

2. The Biennial Report of the Trustees of the Mississippi School for the Blind, from June 30, 1925 to July 1, 1927, pp. 35-39.

3. Report of the Tennessee School for the Blind, Sessions 1927-1929, pp. 31-55.

4. Dedicatory Number, Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Von Boeckmann-Jones Co., Printers, pp. 35-52.

school departments started with the tenth grade. In addition only a limited group of students pursued senior high school work in the California School for the Blind, as the others attended local regular high schools. The Mississippi School for the Blind maintained a four year high school comprising grades nine to twelve inclusive. In the Texas School for the Blind the four year high school included grades eight through eleven. In the interpretation of Table XLVI these grade differences should be borne in mind. Table XLVI presents the courses with the corresponding grades that were taught in the four high schools of Group Three.

English literature and composition were taught throughout the high school years in each school, and rhetoric in some form was taught in each year in the four schools with one exception in the twelfth grade. Spelling was a required course in two schools in grades ten, eleven, and twelve. Grammar was taught as a formal course in the ninth grade in one school.

American history was taught in the four schools, three of them requiring it as a twelfth grade subject. Mediaeval and modern history was a required course in two schools in the eleventh grade, but in the ninth grade in one school. Ancient history was an eighth, ninth, and tenth grade course in three schools respectively. English history was a required course in one school in the eleventh grade. General history was a required course in the eleventh grade in one school and in the twelfth grade in one school. Civics was required in only two schools,

Table XLVI. The Literary Courses Offered in the Four Senior High Schools of Group Three and the Grades in Which They Were Taught

	Grades				
Courses	8	9	10	11	12
English					
Literature	1	2	4	4	3
Rhetoric	1	2	4	3	2
Composition	1	2	4	3	3
Spelling			2	2	2
Grammar		1			
Social Studies					
History					
General				1	1
Ancient	1	1	1		
Mediaeval		1		2	
Modern		1		2	
American			1		3
English				1	
Civics			1		1
Economics					1
Commercial Law				1	
Mathematics					
Algebra	1	2	2	1	
Plane Geometry			3		1
Solid Geometry				1	
Commercial Arithmetic				1	1
Physical Science					
Physical Geography		1			
General	1		2	1	
Physiology					1
Physics				1	
Foreign Language					
Latin		1	2	2	1
Spanish		1	2	1	
Typewriting	1	2	4	3	2

in one as a tenth grade course and in another as a twelfth grade subject. Economics was a twelfth grade subject in one school. Commercial law was taught in one school in the eleventh grade. Commercial arithmetic was taught in the eleventh grade in one school and in the twelfth grade in one school. Physical geography was a ninth grade required subject in one school.

Algebra was a required course in the eighth grade in one school, in the ninth grade in two schools, and in the tenth grade in one school. Plane geometry was a required course in the tenth grade in three schools and in the twelfth grade in one school. Solid geometry was offered in the eleventh grade in one school.

Physics was a required science course in the eleventh grade in one school. General science was a required subject in the eighth grade in one school, in the tenth grade in two schools, and in the eleventh grade in one school. Physiology was a required course in the twelfth grade in one school.

Latin was a tenth and eleventh grade course in two schools respectively, and a twelfth grade course in one school. One school offered Spanish in the ninth grade, two schools in the tenth grade, and one in the eleventh grade.

Typewriting was a required course in the eighth grade in one school, in the ninth grade in two schools, in the tenth grade in four schools, in the eleventh grade in three schools, and in the twelfth grade in two schools.

In all the four schools English literature, rhetoric or public speaking, and composition were definitely stressed in the high school department. Grammar with one exception was not given as a formal subject.

Ancient history, mediaeval and modern history, and American history received about the same degree of popularity in these schools. The other phases of the social studies were given small recognition in the curricula.

Algebra was taught in grades eight, nine, ten, and eleven, but geometry was reserved for the tenth and twelfth grades.

General science was the most generally taught science in this group of schools. No school offered a course in the physical sciences in the ninth grade.

Latin was offered more frequently than Spanish, but both were most popular in the tenth and eleventh grades.

Typewriting was a required course in each of these four schools throughout the high school grades.

A comparison of Group Three with Groups One and Two reveals several differences. In Group Three the study of Spanish replaced French; psychology was not offered as a high school subject; less emphasis was placed on courses in civics, while more stress was placed on typewriting.

The programs of studies of the four schools comprising Group Three manifested evidence of thinking in terms of the students and in terms of modern educational theory as related to the respective groups of children. Substantiation of this evidence is to be found in the objectives stated for the various courses, which possessed a high degree of similarity. Due to this uniformity it has been possible to make a composite

of the general objectives of the various courses for the four schools, which is as follows:

English Literature

1. To develop desirable attitudes and effective habits and skill in reading.

2. To foster enjoyment and understanding of good books.

3. To develop the habit of memorizing intelligently choice selections of prose and poetry.

Written Expression

1. To master the mechanics of written expression.

2. To develop ability to organize and express thought adequately and effectively in writing.

Oral Expression

1. To develop proficiency in the mechanics of speech.

2. To develop the ability to think clearly, logically, and intelligently and to speak easily and effectively.

Social Studies

1. To develop the ability to understand our present modes of living and our contemporary problems, in the light of history.

2. To foster an attitude of loyal support to our national, state, and civic ideals.

Mathematics

1. To acquire skill in quantitative procedure.

2. To become familiar with those concepts of number and space in terms of which the quantitative thinking of the world is done.

Physical Sciences

1. To develop the ability to understand the principles that govern simple scientific facts with which man comes in daily contact.

2. To establish scientific habits of thought and procedure.

Latin

1. To enrich one's English vocabulary.

2. To acquire accuracy and precision in the use of English words derived from Latin.

3. To learn about the facts which relate to the life and institutions of the Romans and their influence on contemporary civilization.

Spanish

1. To give a practical working knowledge of Spanish.

2. To give a new and broader point of view from which to estimate language values, thus enriching general mentality and at the same time adding precision and breadth to the use of the mother tongue.

3. To increase the ability to pronounce and understand Spanish names and phrases in English.

4. To promote through understanding desirable international relations.

Attention is called to the fact that the objectives listed above were quite in harmony with those found in progressive public high schools throughout the country. It is probable that

the other schools for the blind have formulated objectives which give direction to their work, but they did not appear in their printed catalogues for the years under consideration.

English Literature Textbooks. Since it was found that there was a great deal of comparable textbook material used in the schools of Groups Two and Three, it has been assembled without further specific reference to either group. The textual material used in the courses in English literature for the grades nine to twelve inclusive included such a wide array that it seemed advisable to treat them as a unit before presenting the textbooks used in the other curricular branches.

Table XLVII shows the literary selections used in each grade as textbooks and the number of high schools using each book in a specific grade. The data in Table XLVII refer to the literary courses given in all the schools of Group Two with the exception of the Indiana School for the Blind, which did not specify in its program of studies the grades in which the textbooks were used, and the four schools of Group Three.

The list of textbooks represented books embossed in Braille which have been actually used by the students. Reference and supplementary books have been omitted from the list, notwithstanding the fact that they were an important part of the literary work in these schools.

Table XLVII shows that the nine most frequently used selections were: "Julius Caesar," Halleck's "History of English Literature," "Macbeth," "Vision of Sir Launfal,"

Table XLVII. Selections Used in English Literature Courses in the High School Department of Nine Schools for the Blind

Selections	Number of High Schools Using the Selections				
		Grades			
	Total	9	10	11	12
1. Julius Caesar	7	5	1	1	...
2. Halleck's History of English Literature	7	...	1	3	3
3. Macbeth	6	...	1	4	1
4. Vision of Sir Launfal	6	3	3	...	...
5. Sohrab and Rustum .	5	4	1	...	...
6. Silas Marner	5	2	2	1	...
7. Halleck's History of American Literature	5	2	2	1	...
8. Idylls of the King	5	...	3	1	1
9. Hamlet	5	...	...	2	3
10. Lady of the Lake ..	4	4	...	...	...
11. Cummock's Choice Readings	4	1	1	1	1
12. Merchant of Venice	4	4	...	...	...
13. Burns' Selected Poems	4	1	...	1	2
14. Ancient Mariner ...	3	3	...	...	...
15. Ivanhoe	3	2	1	...	...
16. Tale of Two Cities	3	1	2	...	...
17. Sir Roger de Coverley Papers ..	3	...	1	2	...
18. David Copperfield .	3	...	1	2	...
19. House of Seven Gables	3	...	1	1	1
20. Bunker Hill Oration	3	...	...	2	1
21. Emerson's Essays ..	3	...	...	1	2
22. Romeo and Juliet ..	2	1	...	1	...
23. Vicar of Wakefield	2	1	...	...	1
24. Snowbound	2	1	...	1	...
25. Poe's Short Stories	2	1	1	...	...
26. Kentucky Cardinal .	2	...	2	...	...
27. As You Like It	2	...	1	1	...
28. Gray's Elegy	2	...	2	...	...
29. Milton's Minor Poems	2	...	...	1	1

Selections	Number of High Schools Using the Selections				
		Grades			
	Total	9	10	11	12
30. Essay on Burns ..	2	...	...	1	1
31. Washington's Farewell Address	2	...	...	2	...
32. Thanatopsis	2	...	1	...	1
33. Sketch Book	2	2	...	...	...
34. Children's Homer	1	1	...	...	...
35. Last of the Mohicans	1	...	...	...	1
36. Deserted Village	1	...	1	...	...
37. Mrs. Browning's Selected Poems .	1	...	1	...	...
38. Treasure Island .	1	...	1	...	...
39. Man Without a Country	1	...	1	...	...
40. Pilgrim's Progress	1	...	...	1	...
41. A Midsummer Night's Dream ..	1	...	1	...	...
42. Enoch Arden	1	...	...	1	...
43. Essay on Man	1	...	...	...	1
44. Cranford	1	...	1	...	...
45. Burke's Conciliation Speech	1	...	...	...	1
46. Twice Told Tales	1	...	1	...	...
47. Democracy of To-day	1	...	...	...	1
48. Franklin's Autobiography ..	1	...	...	1	...
49. Macaulay's Essay on Milton	1	...	...	1	...
50. The Water Fowl ..	1	...	...	1	...
51. Richard III	1	...	...	1	...
52. Vanity Fair	1	...	...	...	1
53. Bret Harte's Short Stories ..	1	...	1	...	...

"Sohrab and Rustum," "Silas Marner," Halleck's "History of American Literature," "Idylls of the King," and "Hamlet." It is interesting to note that in Counts' investigation of the textbooks used in the courses in literature in fifteen city high schools throughout the country four of the above mentioned selections were included in the list he compiled of the nine most frequently used textbooks.[1] In fact the similarity of the books used by the two types of schools is very marked for all grades. The surmise is that schools for the blind were modelling their literature courses after those given in the public schools, that is, if these eight schools for the blind were representative in this particular of the other schools for the blind.

The following criticism that Counts made with reference to the kinds of books used is significant more or less for both types of schools.

> Shakespeare receives a very large proportion of the emphasis in this list. While Shakespeare's works possess great literary value and while for certain rather highly selected types of pupils they might provide excellent training and lead to the development of wide reading interests, they are hardly suited to the abilities and the needs of the great masses of boys and girls who are finding their way into the high school. Many teachers of English, as they face the situation in the classroom, are becoming increasingly conscious of the existing incongruity and are experimenting with new types of material. An inspection of the entire list of selections included in the table shows this to be the case. These teachers, however, are hampered by tradition and, in some parts of the country, by college-entrance requirements....[2]

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1. Counts, George, S. "The Senior High School Curriculum," Supplementary Educational Monographs, Published in Conjunction with the School Review and the Elementary School Journal, Number 29, pp. 39-44. February, 1926.

2. Counts, George, S. *op. cit.*, p. 40.

A further significant point regarding the textbook situation in schools for the blind was that teachers of English were largely dependent on the material embossed which in many instances was limited and thus frequently constituted a problem. For example, the only American and English histories of literature that were embossed in Revised Braille were those by Halleck. While they had some merit to be sure, they were not without peers and a course that was dependent on one book of this nature was at best restricted.

Table XLVII reveals a variety in the literary forms read, with comparable numbers of each except in the case of biography. Poetry is represented by fourteen selections, novels by fourteen, essays and orations by ten, drama by eight, short stories by three, miscellaneous by three, and biography by one.

The data of Table XLVII show that in no case was one book used in all four grades except Cummock's "Choice Readings" and in this instance different selections were assigned to the various grades. Twenty-seven pieces of literature were read in one grade distributed among the eight schools, eighteen were read in two grades, and eight were read in three grades. This shows that there was fairly close agreement among the eight schools for the blind with reference to the textbooks assigned to a definite grade. This uniformity of textbook material was probably largely dependent on the fact that the extent of embossed material was limited, which case rendered it unfair to assign other causes for the situation.

It is hoped that in the future selections will be available

for the literary courses that emphasize human as well as literary values. It is particularly essential that blind boys and girls have contacts that will widen their scope of knowledge and enrich their experiences so that the unnecessary vitiating struggles of life will be minimized and that they will learn to face life not only with courage but with intelligence and understanding. Their lives are inevitably more passive than are the lives of those with sight and they depend greatly upon the stimuli which are within their physical environment. Through literature primarily can they be led to higher and higher levels of spiritual, moral, aesthetic, and intellectual development.

Textbooks. In the matter of textbooks used in the several courses of the curricula; namely, social studies, mathematics, physical sciences, and foreign languages, there was a high degree of agreement among the nine schools investigated. The textbooks in common use in these departments in the nine schools constituting Groups Two and Three designated in the catalogues were:

Social Studies

Ashley, "The New Civics"
Atkinson, "European Beginnings of American History"
Bays, "Business Law"
Beard and Bagley, "History of the American People"
Cheyney, "A Short History of England"
Eggleston, "Great Americans"
Guerber, "Story of the Greeks"
Hayes and Moon, "Modern History"
Hill, "Community Life and Civic Problems"
Latane, "History of the United States"
Muzzey, "An American History"

Myers, "Ancient History"
Myers, "Mediaeval and Modern History"
Sheldon and McDowell, "The Art of Selling"
Smith, "Commerce and Industry"
Thompson, "Elementary Economics"
"The Constitution of the United States"
"The Declaration of Independence"

Mathematics

Van Tuyl, "Essentials of Business Arithmetic"
Wells and Hart, "First Year Algebra"
Wentworth and Smith, "Plane Geometry"

Physical Science

Blackwelder and Barrows, "Elements of Geology"
Caldwell and Eickenberry, "Elements of General Science"
Jewett, "Physiology, Hygiene, and Sanitation"
Millikan and Gale, "A First Course in Physics"
Sedgwick, "Human Mechanism"
Thompson, "Outlines of Science"

Foreign Languages

French

Daudet, "Tartarin de Tarascon"
France, "Le Crime de Sylvester Bonnard"
Halevy, "L'Abbe Constantin"
Maupassant, "Huit Contes Choises"
Meras, "French Verbs and Verbal Idioms"
Meras, "Le Premier Livre"
Meras, "Le Second Livre"

Latin

Allen and Greenough, "New Caesar with Vocabulary"
Bennett, "New Latin Composition"
Bennett, "New Latin Grammar"
Cicero, "Orations"
D'Ooge, "Elements of Latin"
Greenough, D'Ooge, and Daniel, "Caesar's Gallic War"
Virgil, "Aeneid"

Spanish

Alarcon, "El Sombrero de Tres Picos"
Carrion and Aza, "Zaragueta"
Crawford, "A First Book in Spanish"
Crawford, "Temas Espanoles"

Escrich, "Fortuna"
Fuentes and Francois, "A Trip to Latin America"
Olmsted and Sirich, "First Spanish Reader"

Few significant generalizations can be made concerning the textbooks employed in the various lists above since once more the lack of embossed textual material prohibited wide practice in this respect. It was unfortunate that Myers' "Ancient History" continued in extensive use in these schools and unless the teachers employed a good deal of reference material themselves and were ingenious enough to present the subject from the modern points of emphasis, ancient history ran the danger of being factually learned by students in accordance with traditional practice.

The textbooks in foreign languages show a somewhat greater degree of efficiency. This is true of the reading material rather than of the grammar material. As an example, Crawford's "First Book in Spanish" was considerably out of date, but it continued in use in schools for the blind as the original cost of production was great and expense was a more potent factor than more effective textual material. One difficulty that hindered the use of current textbooks was that a book was not embossed until its value had been proved and soon thereafter a newer and often better book superseded it in print and the embossed text had to continue in use long enough to justify its cost of production. This situation was referable to all embossed textbooks and presented a real teaching problem.

b. Music Department

The importance of music in the education of the blind has been recognized to the extent that without exception every residential school for the blind maintained a music department in which excellent, thoroughgoing training was given. The work of this department generally embraced courses in: piano, organ, violin, vocal music, brass band and orchestra, harmony, history of music, and music appreciation.

The study of music in its essentials was carried on very much alike in all the schools for the blind. In order to appreciate the scope of the work in this department, the following representative outlines for the various kinds of music instruction have been selected from the reports of several of the schools for the blind.

Piano

Primary: Revised Braille musical notation; position of body and hands; Mathews' "Standard Graded Studies," Book 1; Meyer's "The First Etude Album"; Mason's "Touch System"; touch and rhythm; analyzing.

Intervals, scales and chords; Kohler's Etudes; Op. 50; Brauer's Etudes, Op. 15; sonatinas and pieces; duets, trios and quartettes.

Intermediates: Louis Plaidy's Technical Studies: Exercises without moving the hands; do. with the hands firmly fixed; do. with the hands moving; do. changing of the fingers upon one key; scales in different forms; chords arpeggios.

Duvernoy's Etudes Op. 120; Beren's Studies, Op. 61; Czerny's Studies, Op. 299; Heller's Op. 24; Krist Studies.

Sonatas and pieces; duets, trios, and quartettes; staff notation.

Advanced Course: Louis Plaidy's Technical Studies: scales, chords and arpeggios; scales in double thirds and sixths; Curlitt Studies in Double Thirds and Sixths, Op. 100;

Cramer's Studies; Heller's Etudes, Op. 45; Czerny's Etudes, Op. 740; Bach's Two and Three Voiced Inventions; Czerny's Toccato Op. 92; Moscheles' Preludes Op. 73; Doering's Octave Studies Op. 25; Moscheles' Etudes, Op. 70; Clementi-Tausig, Gradus ad Parnassum; Heller's Op. 16; Kullack's Octave Studies, Book 2 and 3; Bach's Preludes and Fugues; Chopin's Studies.[1]

Organ

First Year--The Organ (New Edition), by Dr. John Stainer. Playing in chapel the second and third terms, and thereafter. Simple compositions.

Second Year--Combined pedal and manual scales in thirds and sixths in parallel and contrary motion.
Buck, Studies in Pedal Phrasing.
Bach, Little Preludes and Fugues.
Hymn-tune playing; marches, toccatas, etc.

Third Year--Organ suites and sonatas. Compositions of the most varied type. Church service playing.[2]

Violin

In order to begin the study of violin the student must have completed two years of piano study. The course of study consists of manner of holding violin and bow, bowing on the open strings, scales in major and minor, exercises and graduated study to advanced work, ensembles and solos by the best composers.[3]

Vocal Music

High School Chorus--Four-part choruses for mixed voices from Oratorio, Opera and Cantata, together with suitable Anthems for high and normal schools are learned and sung.

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1. California School for the Blind, Third Biennial Report, For the Period Ending June 30, 1928, Printed by the Class in Printing, California School for the Deaf, Berkeley, California, p. 32.

2. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 52.

3. Dedicatory Number, Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Van Boeckmann-Jones Co., Printers, pp. 49-50.

Position, breathing, enunciation, attack, formation of habits essential to good voice production and choral singing are given attention.

Glee Club Work--There is a glee club for the boys and one for the girls, made up of pupils from the high school chorus. These meet twice a week throughout the year.

Voice Training--Individual lessons are given to such pupils as in the opinion of the superintendent and vocal instructors give promise of becoming good solo singers, or who, for other reasons, might be sufficiently benefitted to warrant such training.

Points Emphasized: Careful attention given to proper use and development of the voice; posture; breathing; principle of relaxation, purity and resonance of tone; phrasing, accent, rhythm, and enunciation; style and interpretation.

Group Voice--All members of the high school chorus not taking private voice meet in proper groups, at least once per week, for voice training and drill work.

Note--All pupils are required to take vocal music unless excused by the instructors.[1]

Band

The following methods are used: Flute and Piccolo; Devienne's Method. Clarinet, Klose's Method. Cornet, Saxophone, Trombone and Tuba: Orbau's Method.

In all these instruments the following course is pursued:
First year--Tone production and the major scales.
Second year--The minor scales and arpeggios.
Third year--Solo work.[2]

Harmony

E. F. Richter's Manual of Harmony; Alfred Richter's Additional Exercises; Foote and Spaulding's Modern Harmony. Intervals, triads and inversions, seventh chords and inversions, modulation, altered chords, melody construction, melody accompaniment, part movement. Simple and double counterpoint; canon and fugue; musical forms.[3]

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1. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 46.

2. Dedicatory Number, Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Van Boeckmann-Jones Co., Printers, p. 50.

3. California School for the Blind, Third Biennial Report, For the Period Ending June 30, 1928, p. 33.

History of Music

Filmore, McFarin, Hamilton and Baltzell are taught in connection with miscellaneous reading on all musical subjects.[1]

Music Appreciation

In most of the schools for the blind small groups of the advanced students meet at stated intervals to listen to and discuss informally musical selections under the guidance of members of the music staff.

Music is Light in Darkness for the blind. In the place of visualizing those things that are beautiful in the objective world, blind pupils have been taught to interpret and appreciate all that can be gained through the auditory sense. Music has been used to present a variety of pictures to their minds. Music has been made an expression of their numerous moods and sentiments. For them it has become a magic delight that has compensated for their incapacity for comprehending the visual arts.

The pupils in the various schools for the blind have been taught music and not to play by ear, as is generally supposed. There has been developed a complete Braille musical notation which makes the transcribing of all music possible. Feeling the dots with the left hand, the pupils have learned to play with the right hand what they feel. The notes played with the left hand are read with the right hand. They have had to memorize measure by measure, which has proven to be a slow process at first, but their efforts have been rewarded inasmuch as they have come to know thoroughly what they have so painstakingly studied. By means of the substitution of Braille notes

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[1] Report of the Arkansas School for the Blind, 1929-1930, p. 18.

for printed notes students in schools for the blind have been taught music by methods similar to those in general use in the public schools.

Since music has been a subject particularly adapted to the blind, it has entered very prominently into the education of the blind. There has been a popular misconception that the blind are apt to be more talented in music than the sighted. This has been shown to be an entirely erroneous idea. The fact of the matter is that the majority of blind students have only an average degree of talent and many have none at all. It can be readily seen that the loss of sight does not ipso facto develop musical perception. However, the desire for music engenders in the blind more ambition to learn music coupled with the fact that they can concentrate more easily as they have fewer distractions than those with sight. In other words, the necessity of practice and concentration is realized and faced by blind students. Then, if there is any latent ability, it is recognized and fully developed.

All students in schools for the blind have not been obliged to study music. Every child has been given an opportunity to learn to play an instrument and by a selective process those who have shown special aptitude have been given advanced training. This has been true for voice culture also. Promising students have received individual training but the major part of each student body has participated solely in choral work.

Music offers a field in which the blind can find a vocation.

It affords them a means of earning a living as teachers, organists, accompanists, soloists, etc. However, the sightless must excel in music to a greater extent than those with sight. This applies to other vocations as well. Unless a visually defective person can do his work much better than any one else, his opportunities are limited.

But music has meant so much to the blind that they have not thought of it only in terms of earning a living. A knowledge of music has given them a richer life. They have recognized in it a universal language. It has inspired them, strengthened them, and symbolized for them the joy of living. It has proved to be an art and a recreation to the blind.

Music tends to bring out culture in the life of the individual at the same time bringing him in contact with cultured individuals. It is a mistake for schools to aim to send out skilled players merely. They should develop musicians in every sense of the word. Even greater stress should be laid upon music as a refining influence in schools for the blind than is the practice to-day. Those in charge of the music department should be constantly aware that music will often be the means of introduction of their pupils to social life. Recognizing that the blind are a part of a social organism, this is another opportunity to help them gain their legitimate place in society.

c. Industrial Department

The industrial department was one of the four major

departments in schools for the blind. Its work has been emphasized from the earliest days of the education of the blind when educators of the visually handicapped became cognizant of the value of training in the manual arts for the blind. The aim of this department has been to develop coordination of the intellect and the body. In some students vocational skill has been developed but this has not been possible with every student, nevertheless, a modicum of this training has been found to have a practical value for all students. It is important that blind students learn to be self-supporting and useful citizens and they cannot expect to depend on chance occupational openings on leaving school for which they have received no preparation. In fact, schools for the blind have offered practically all the training of this nature that has been available to blind boys and girls. It must be understood, however, that although to develop a degree of manual dexterity has been imperative for all blind students, this has not implied the necessity or even advisability for every blind boy and girl to prepare to follow a vocational pursuit.

The character of industrial training given in schools for the blind has been found to be comprehensive and practical. The work in this department has been sufficiently varied to meet the interests, abilities, and needs of a diverse student body. The most common branches of this department in which instruction has been given are: typewriting, dictaphone, piano tuning and repairing, basketry and weaving, shop work or manual training or sloyd, broom-making, chair-caning, mattress-making, mop-making, hammock-making, mat-making, brush-making,

knitting, crocheting, sewing, cooking, and poultry husbandry.

There has been some diversity of opinion concerning the relative merits of these several manual subjects, but each school has provided for the instruction of the ones that it has deemed of most value and which were feasible within its program of studies.

The industrial courses were well organized as a whole and the objectives were clearly defined and formulated. A great deal of the instruction has had to be individual and hence opportunity was provided for each child to progress at a pace commensurate with his ability.

In the program of studies published by the Maryland School for the Blind there was found an example of job analysis with reference to the course in woodworking. This showed very definitely a modern tendency in curriculum making in this institution.[1]

Many of the schools have cited instances where their former students have put to practical use the industrial training

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1. Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, pp. 20-24.

received in the schools.[1] This has been gratifying and encouraging especially in this machine-driven day when opportunities for all hand workers have been limited and competition has been keen.

d. Physical Education

Many of the residential schools for the blind were found to have modern well equipped gymnasiums where the students might participate in a variety of physical activities. Outdoor recreational equipment provided further opportunities for physical development. The physical training program for these schools comprised calisthenics, apparatus work, swimming, skating, hiking, games, dancing, boxing, wrestling, stunts and tumbling, marching, and pyramid building. Not every form cited was to be found in every school, but a sufficient number of these physical activities was represented to justify the belief that physical education departments in schools for the blind have been integral parts of their programs of studies.

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[1] Report of the Board of Regents and Officers of the New Mexico Institute for the Blind for the Biennial Period Ending November 30, 1924, Alamogordo, New Mexico, p. 8. 23.

Thirty-Sixth Biennial Report of the Missouri School for the Blind to the Fifty-Fifth General Assembly, January 1, 1929, pp. 34-38.

Perkins Institution and Massachusetts School for the Blind, Ninety-Second Annual Report of the Trustees, 1923, Boston: Wright and Potter Printing Co., 1924, p. 19.

Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fifth Annual Report, 1922, p. 25.

The following illustration from the Texas School for the Blind serves as a model to describe in detail the kind of work that the physical education departments of these schools carried on.

High School

Girls

1. Correct posture.
    (a) Best sitting position.
    (b) Best standing position.

2. School gymnastics. Sixteen Swedish Day Lessons.

3. Light apparatus work.
    (a) Stall-Bar.
    (b) Swedish Boom.

4. Hand apparatus.
    (a) Dumb-bells.
    (b) Indian clubs.
    (c) Wands.
    (d) Grace hoops, etc.

5. Social dancing.

6. Aesthetic dancing.

Boys

Apparatus work, marching, Swedish gymnastics and pyramid building.[1]

Frequently the work achieved by blind students in the physical education departments has been of such a high calibre that public exhibitions have been made possible. As an example, the program of the Exhibition of the Department of Physical Training of the New York Institute for the Education of the Blind

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[1] Dedicatory Number, Catalogue and Announcement, Texas School for the Blind, Austin, Texas, 1930-1931. Austin, Texas: Van Boeckmann-Jones Co., Printers, p. 43; 45.

held in March, 1929 is quoted.

The Olympia Gods are Gone but the Dance and the Games Live On

Introduction

Characters: Zeus, Hermes

Episode I

Prologue	Hermes
Formal Exercises, Free Hand	9 Girls
Dumb-Bell Drill	8 Boys
Tumbling Head Spring, Hand Spring, Neck Kip, Forward and Backward Roll	8 Boys
Stunts Sitting and Stomach Balance, Rocking Horse, Elephant Walk	6 Girls

Episode II

Prologue	Hermes
Scene at Scout Camp	5 Boys

Interlude

Episode III

Prologue	Hermes
Heavy Apparatus Parallel Bars, Slide Horse, Balance Board	10 Girls, 8 Boys
Pyramids	13 Girls, 30 Boys

Episode IV

Prologue	Hermes
Clog Dance--"On Deck"	5 Boys
Interpretive Group Dance--"Balloons"	6 Girls
Singing Dance--"Oats, Peas, Beans and Barley Grow"	7 Girls
Folk Dance--"Swiss Mountaineers"	6 Girls

Conclusion

Scene: Evening on the Day of the Third Celebration of the Olympic Games

Characters: Zeus, Hermes, and Children

Procession and Tableau[1]

There has been some attention given in these schools to corrective work in the physical education departments.[2] Since this has been a need that is most urgent among blind students, it is advisable that corrective exercises receive increased emphasis.

Some form of physical exercise has been participated in daily by the students throughout their high school years in

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1. Year-Book of the New York Institute for the Education of the Blind, Ninety-Seventh Year, Ninety-Fourth Annual Report of the Board of Managers, 1929, New York: Charles Francis Press, 1921, pp. 46-47.

2. Idaho State School for the Deaf and the Blind, Twelfth Biennial Report, 1929-1930, Gooding, Idaho, p. 20.

   The Biennial Report of the Trustees of the Mississippi School for the Blind, From June 30, 1925 to July 1, 1927, p. 26.

   Fourth Biennial Report of the California School for the Blind, for the Period Ending June 30, 1930, Berkeley, California: Department of Printing, California School for the Deaf, p. 26.

   Twenty-Seventh Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1930. B. P. Walker: State Printer, Topeka, 1930, p. 6.

   Seventy-Sixth Annual Report of the South Carolina School for the Deaf and the Blind, Cedar Springs, 1924, p. 11.

several of the schools.[1] This regular training has been regarded by the superintendents of these schools as worth while since they have found its good effects apparent in improved health, posture, and general habits of the students from year to year. The problem that remains to be solved is what kind of physical training is the most beneficial to these children? It is true that this problem is by no means unique to the blind, for schools in general are searching and experimenting in hopes that better methods will evolve to insure improved physical development of school children. An instance of the changing conception of the value of formal gymnastics transferred to other forms of activity, especially, in this case, in athletics is found in these statements describing the physical training in the Maryland School for the Blind:

> The course of study in this department is so planned and constructed as to take into consideration the maintenance of the health of the pupils and the coordination of the forces of the mind and body.
>
> Intra-school competition in sports is stressed as being more valuable to the blind than formal gymnastics; just as it is felt to be more important in the public schools. A small amount of calisthenics and apparatus work is given to those who need special attention.

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[1] Sixty-Third Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, For the Year 1930-1931, New York: Burland Printing Co., 1931, p. 24.

Seventy-Sixth Annual Report of the South Carolina School for the Deaf and the Blind, Cedar Springs, 1924, p. 11.

Thirty-Fifth Biennial Report of the Missouri School for the Blind to the Fifty-Fourth General Assembly, January 1, 1927, pp. 10-11.

> Formal gymnastics are not stressed, because it is felt that in using the activity wherein lies the greater interest, greater mental, moral and physical benefit results. Form is stressed in all the activities as a means to an end, thus differing from formal gymnastics.[1]

The small number of children in residential schools for the blind makes it possible to diagnose more easily and thoroughly the physical needs of the students and to give a good measure of individual attention. In addition, it facilitates the coordination of the work of the physical education department with the other departments of the school. The need for this procedure is obvious when the general health condition of blind students is considered. The general lowered vitality and low muscular tone of the blind must be combatted which makes constructive physical training singularly imperative.

The constant process of orientation to an objective environment debilitates the physical vigor of blind boys and girls which condition challenges the physical training departments to find means to restore this deficiency in energy. To promote the health of the students has been the paramount aim of all physical education, but to help students to acquire correct posture and grace of movement, and to make necessary physical adjustments are not only desirable but are indispensable aims of any physical training that deserves a place in the educational program.

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1. Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 28.

2. Religious, Moral, and Character Training

The religious, moral, and character training in these special schools has been found to be so blended that a treatment of one involves a discussion of the other two. Although every residential school for the blind included in this study has been definitely non-sectarian, provision has been made in all for the religious training of the students. The children attended religious services of the churches of their own faith, and in many schools additional religious services were held in the school on Sundays and during the week, not favoring any one denomination. For example, the North Dakota School for the Blind reports:

> Brief chapel exercises are held each morning in the assembly room before the work of the day begins. The pupils, teachers, and superintendent attend.
>
> These exercises are intended to promote earnestness and thoughtfulness, and to give both a moral and spiritual uplift.
>
> Each Sunday evening all assemble in the chapel and spend an hour in the singing of hymns chosen by the pupils. All of the exercises are strictly non-sectarian.
>
> Pupils are expected to attend the church designated by their parents at least once each Sunday, except when they are excused for sufficient reasons. Teachers accompany the girls and younger pupils.
>
> Pupils are permitted to attend Sunday school in town if they so desire.[1]

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[1] The Eleventh Biennial Report of the Superintendent of the North Dakota School for the Blind, To the Board of Administrators, For the Biennial Period Ending June 30, 1928, p. 17.

Another example is furnished by the practice at the Iowa School for the Blind.

> Both the moral and religious training of the pupils of the school are carefully looked after and guarded. All students are encouraged to attend the religious services of one of the down-town churches, the choice of denomination being left with each individual pupil. The churches and the school are in full accord, both looking to the moral and spiritual elevation of the students of the school. There are the regular religious services of the churches of Vinton, as has been mentioned, but there is fostered at all times a wholesome spiritual development within the school. First there are the chapel exercises, six times a week. These are attended by students and teachers alike. These chapel exercises are strictly of a religious nature, an unwavering attempt being made to place them upon a high moral and spiritual plane. In part, at least, this object has been achieved, former students frequently writing back to the school that the chapel is one of the events of school life that they miss most. Then there are the Sunday school classes, the dormitory influences of devoted and spiritually minded matrons, the students' prayer meeting on Sunday afternoon. While these religious influences are constantly knocking at the doors of students' hearts, yet it must be admitted that they do not always find entrance into life. But that has ever been true throughout all the ages of Christianity. However, the school is making and will continue to make its contributions to the spiritual needs of the group within its walls, hoping that the soil may be prepared for seed of wholesome life, if not now, by and by.[1]

A third example is the provision for religious and moral training made in the Mississippi School for the Blind.

> ....It is our desire that religion, the basis of taste for intellectual pursuits and virtuous habits, should throw her healthful restraints over the students. With this in view, the public exercises of each day are opened with reading of the Scripture and prayer. One night in each week is devoted to a meeting of the Students' Christian League which is held in the auditorium. All students are invited and urged to be present at this meeting. This organization has a

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[1] The Iowa School for the Blind, Vinton, Iowa, pp. 9-10, [1929-1930].

> very beneficial influence upon the moral and religious character of the students under the guidance of one or more of their instructors.[1]

One further illustration from the New York State School for the Blind is indicative of the training pursued in the other schools not cited.

> The moral and spiritual development of our pupils is fostered by precept and example, by regular Sunday church attendance, by young people's meetings for religious purposes, and by occasional attendance at holy days and special services conducted by the churches which the pupils regularly attend.[2]

The schools generally have looked with favor upon their students attending church services in the community. The blind students were in this way given the privileges of church attendance with sighted children and normal relationships were thereby fostered.

The moral growth of all children is largely dependent upon the surrounding influences. The residential school has been accountable for the care of its student body twenty-four hours a day which has involved additional problems and responsibilities.[3]

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1. The Biennial Report of the Trustees of the Mississippi School for the Blind, From June 30, 1925 to July 1, 1927, p. 27.

2. Fifty-Fifth Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1922-1923, Albany: J. B. Lyon, 1924, p. 13.

3. Report of the Board of Regents and Officers of the New Mexico Institute for the Blind, For the Biennial Period Ending November 30, 1924, Alamogordo, New Mexico, pp. 15-17.

Standards of living were necessarily high in these schools in order to furnish a suitable environment for the blind children. The atmosphere had to be wholesome and productive of high ideals. Moral instruction and character training were found to be integral parts of the work of the schools. The schools realized that the character of the teaching staff and household department had to be at all costs of a high type. For instance, such a statement is found:

> The care and training of children outside the class room presents many problems, especially in a congregate school. As these children are away from home the major portion of the year, the school must of necessity assume many of the responsibilities of the parents. The variety of homes from which these children come adds greatly to the task. The gentle-mannered child and the rough, boisterous one have both to be assimilated into the big family, and both must have the peculiar training suited to their needs. They must be taught to be neat and clean, and have proper regard for the rights of others. Their table manners and their daily behavior must be carefully watched and mistakes corrected. Their recreation and amusement must be properly provided for and supervised. Caring for property and the elimination of waste and destructiveness must be instilled into them daily by precept as well as by example. To give this training requires the employment of well trained, cultured supervisors, matrons and house-mothers who have the love of children in their hearts and who possess sympathy, tact and firmness of purpose. We have been fortunate in having our children in the care of such persons and the results have been highly satisfactory.[1]

The example set by these older people in their daily relationships with the students has been highly contributory to the ideals and attitudes formed by the latter.

A survey of the catalogues of the residential schools for the blind gave evidence that not one was found lacking in its

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[1] Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fifth Annual Report, 1922, p. 27.

duty to enrich the spiritual and moral life of its students and to inculcate ideals, attitudes, and desires that led to character building in so far as they were guided by current knowledge and understanding.

3. Social Program

a. Extra-Curricular Activities. Discussing the inherent potentialities of extra-curricular activities E. K. Fretwell said:

> The so-called extra curricular activities,....., offer the school the most useful tools for that adaptive, directive, and corrective training of youth which it is now conceived to be the function of the school to provide.[1]

The truth of this statement has become increasingly apparent and consequently a great deal of interest has been focussed upon these activities which have revolutionized to a great extent modern school procedure. Their possibilities as educational agencies have won for them a vital place in the educational programs of the residential schools for the blind. Consulting the official reports published by these schools over a period of ten years, one is impressed with the preponderance of space devoted to extra-curricular activities which is in itself a testimony of the recognition of their relative importance for blind children.

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1. Fretwell, E. K. Extra-Curricular Activities in Secondary Schools. Boston: Houghton Mifflin Co., 1931, p. vii.

In every school for the blind some attempts have been made to organize a social program, but there has been little uniformity either in the extent or administration of these programs. A check was made of all the schools and it was revealed that each school participated in some, if not all, of the following activities classified as: clubs, social events, assemblies, publications, athletics, and excursions.

Clubs:-- Included under this heading were such organizations as Camp Fire, Girl and Boy Scouts, Girl Reserves, literary, dramatic, debating, musical, foreign language, and athletic clubs. The value of the Camp Fire, Girl and Boy Scout, and Girl Reserve organizations for boys and girls has long been realized. Within the last decade these organizations have been formed in schools for the blind where their influence has been of inestimable worth. Particularly has this been true in cases where these organizations had a close affiliation with similar organizations outside of the school.

The various clubs mentioned above, when properly conducted, have offered unlimited possibilities for the development of those essential qualities of initiative, cooperation and leadership. The programs that have been a usual part of each club's activities have afforded chances for the development of latent ability and for increasing confidence and self-possession in blind children so frequently hampered by a sense of inferiority and timidity. The amount of information that is disseminated throughout the club activities is not to be disregarded but must hold second place to their socializing value.

Social Events:-- This caption embraces a wide variety of functions, such as: parties, dances, teas, and banquets, which have not been sponsored exclusively by the clubs. Each school has made a schedule of social events that spread these events throughout the school year at stated intervals. In the increasing number of cases where the students have been allowed to organize their own social affairs, to be sure with teacher guidance, social events have become an educative agency. Most blind children are socially deficient and every opportunity must be offered them to assume responsibility and to learn through participation the social graces and amenities. Imitation that is so potent a factor in the educative process among normal children is practically denied blind children, therefore compensation must come through more extensive opportunities for pupil participation.

The problem of the intermingling of the sexes has been a vexing one since the establishment of schools for the blind. It has continued to be a common practice among some of the schools to segregate the boys from the girls as much as possible, particularly at social festivities. This has frequently been accomplished by entirely separate social affairs for each sex. Again in some schools on occasions the blind girls have entertained exclusively sighted boys invited from the outside and in turn the blind boys have entertained only sighted girls.[1]

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[1] Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 57.

This is a desirable practice, but it entails such difficulties as finding suitable outside boys and girls who will enjoy the parties with blind boys and girls.

Wherever there is mingling of the sexes, whether among blind or sighted boys and girls, careful supervision is a wise prophylactic measure. The undesirability of intermarriage among the blind is obvious, but is there not a danger of arousing an unnatural degree of interest in the opposite sex by creating an artificial environment where social communication is tabooed?[1] Are not proper standards of social conduct most effectively taught when coupled with practice?

Assemblies:-- The assembly programs in schools for the blind have been in principle quite similar to those held in the public schools. It was found that the instructional staff in these schools was realizing more and more the importance of delegating responsibility to the students. The practice of articulating class work and assembly activities began to find support in a few of these schools.

Some of the schools held daily assemblies and in other schools a weekly assembly was the custom. The program manifested wide variety, from an informal meeting lasting a few minutes to elaborate performances. The classification made by M. Channing Wagner from a survey of public school assemblies is applicable to

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[1] Wilson, E. A. "Discipline and the Social Program in Residential Schools." American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 552.

assemblies held in schools for the blind; namely, devotional, instructional, entertaining, aesthetic, and civic.[1]

The two following descriptions of school assemblies quoted from the school reports will illustrate what the actual procedure has been.

> All pupils and faculty meet in assembly for thirty minutes daily. The first part of the time is given to devotional exercises, and the last fifteen or twenty minutes to inspirational talks, musical numbers, readings, etc. This plan gives fine opportunity for children to appear frequently on semi-public occasions. All grades participate and get the opportunity of singing, playing, or reading before the school quite frequently.[2]

> The following programs presented at the morning assembly by different groups have contributed much to the enjoyment and interest of our school life. In this working out of school projects the pupils have gained much initiative and confidence and discrimination in essential values.
>
> High School:
>   Armistice Day.
>   Constitution Day.
>   Washington's Birthday.
>
> History--5th, 6th, 7th and 8th Grades:
>   Veiled Prophet's Parade--Historical Pageant.
>   Franklin's Birthday
>   Washington's Birthday.
>   Columbus Day.
>   Thanksgiving Day.
>   School's Birthday.

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1. Wagner, M. Channing. Assembly Programs. New York: A. S. Barnes and Co., 1931, p. 42.

2. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 17.

English--5th Grade:
Poems about birds.
Autumn poems including original verses.
Lincoln program.[1]

Assembly programs must contribute to the aims of schools for either the blind or sighted to be a vital educational force. In so far as they do, they may be considered a reflection of the modern progressive trends in education.

Publications:-- The student publications in schools for the blind have taken the forms of annuals and smaller publications that have appeared at more frequent intervals. The data concerning this form of activity have not been available in sufficient amount to describe the situation. The practice has been found to have existed in some of the schools and the impression has been created that where it is customary, publications have been planned and executed by combined efforts of teachers and pupils. Just how far the standards represented those of the students has not been determined. Some of the schools have not engaged in this activity realizing that the immense amount of work entailed was encumbent upon a relatively small number of students and therefore its educational value was proportionally small in extent.

Athletics:-- The management of athletics in schools for the blind has been under the complete control of the schools and there has been no community interference, which fact relieved

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[1] Thirty-Seventh Biennial Report of the Missouri School for the Blind to the Fifty-Sixth General Assembly, January 1, 1931, pp. 12-13.

them of problems which ordinarily confront the public schools. Generally the athletics in schools for the blind have been confined to intra-mural activities, but interschool competition has been more popular among a group of the eastern schools than elsewhere in the country.[1] The proximity of schools in that section of the country has abetted closer interschool relationships.

There has been a national athletic association of schools for the blind that has held annual athletic contests which have

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[1] Sixty-First Annual Report of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, New York, For the Year 1928-1929. Albany: J. B. Lyon Co., Printers, 1929, p. 14.

Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-Second Annual Report, 1929, p. 20.

Year-Book of the New York Institute for the Education of the Blind, Ninety-Eighth Year, Ninety-Fifth Annual Report of the Board of Managers, 1930, New York: Charles Francis Press, 1930, p. 33.

Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 11, 57.

Perkins Institution and Massachusetts School for the Blind, Ninety-Second Annual Report of the Trustees, 1923, Boston, Wright, Potter Printing Co., 1924, p. 19.

DeMartino, Matthew. "The Value of Competitive Athletics." American Association of Instructors of the Blind, Proceedings of the Thirty-First Biennial Convention Held at New York City, June 27 to July 1, 1932, pp. 789-792.

elicited real enthusiasm from many of the schools.[1]

There have been few forms of athletics in which blind students could not participate if the goal has been the development of the students rather than that of developing professional athletes. The forms of physical exercise most adapted to participation by the blind have been: wrestling, bar vaulting, boxing, skating, swimming, and hiking.

The relative merits of the various forms of athletics for the blind have been commensurate with those for sighted children. Through participation in athletics blind boys and girls have been able to learn the same lessons of cooperation, team work, fair play, and good sportsmanship as other children. They have derived likewise benefits from sports that develop

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[1] Hodges, J. A. "National Athletic Association of Schools for the Blind," Outlook for the Blind, 19: 33-35 (September, 1925).

Report of the Board of Trustees of the Colorado School for the Deaf and Blind, For the Year Ending June 30, 1930. Colorado Springs: Printed at the School, p. 40.

Twenty-Sixth Biennial Report, Minnesota School for the Blind, Faribault, For the Two Years Ending June 30, 1930, pp. 10-11.

Thirty-Fifth Biennial Report of the Missouri School for the Blind to the Fifty Fourth General Assembly, January 1, 1927, pp. 10-11.

Year-Book of the New York Institute for the Education of the Blind, Ninety-Seventh Annual Report of the Board of Managers 1929, New York: Charles Francis Press, 1929, p. 29.

initiative, confidence, and leadership.

Excursions:-- One of the most pleasant and beneficial types of activities that blind students have enjoyed has been excursions of various kinds. They have meant extra-mural experiences and they have thus provided new environment, sensations, and stimuli. Picnics, hikes, camping trips, outside entertainments, and visits to various places of interest have been anticipated by all blind children. The schools have planned frequent excursions for their students realizing the educative value of the new contacts and the health producing benefits that are fostered by all outdoor activity especially when it takes place outside the pale of the city.

In order to present a standard which will be invaluable in the planning of all extra-curricular activities the following statement of sound principles underlying the formulation and organization of programs of activities is quoted.

> 1. The pupil is the center around which, and for which, all educational activity is organized.
>
> 2. The units of activities selected should be only such as to meet the following tests:
>   a. They must rise out of, or find their justification in, the natural or acquired interests of the pupil.
>   b. They must meet definite needs of individuals and groups of individuals.
>   c. They must be readily adapted to the abilities and aptitudes of pupils of varying degrees of preparation or previous training in particular kinds of activities.
>   d. They must, if possible, idealize life activities.
>
> 3. The organization of the units of activities should provide for the following conditions:
>   a. The program of activities and the program of studies should supplement each other in the total school program.

b. Definite provision should be made for common and peculiar needs of various individuals and groups of individuals.
c. The form of organization should be subordinate to its fundamental spirit and should be determined largely by the pupils as they develop the need for, and interest in, definite organization.
d. The program of activities should be organized in such manner as to provide as fully as possible for training in leadership and followership, as well as in other important social and individual qualities.
e. The daily schedule should include units of activities as well as subjects of instruction. The same care should be used in making adjustments to meet individual needs for activities as for the formal school subjects.[1]

As a whole, schools for the blind have been keenly interested in extra-curricular activities. This interest has manifested itself in various forms and degrees as the preceding discussion has shown. The problems that these schools have faced in this matter have been common to all schools. The status of the extra-curricular program applying to the program of studies in schools generally throughout the country has been succinctly described by Smith.

> The curriculum and the extra-curriculum are potentially complementary agencies, but as yet they have scarcely gotten beyond the point of supplementing each other in a general way. The problem that lies ahead is to relate and integrate the two. The solution of this problem will bring us to the threshold of the ideal curriculum.[2]

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1. Grizzel, E. D. "The Administration of Student Activities in the Secondary Schools." _Educational Outlook_, 1:115-122 (March, 1927).

2. Smith, W. A. _Secondary Education in the United States_. New York: The Macmillan Co., 1932, p. 200.

b. Local Auxiliary Agencies. A constant struggle has been taking place in the residential schools for the blind to enrich the experiences of the children. Realizing that the life within the school was innately artificial, every effort has had to be made to normalize and broaden its scope.[1] The most efficacious results along this line have been derived from those local agencies including organizations and individuals that have not been officially connected with the schools but that have taken an active interest in their welfare.

Foremost among these agencies has been the Lions Club that has functioned as a national association and as individual clubs in various communities in rendering manifold services to the blind. A most important work sponsored by this organization has been the editing and printing of the Juvenile Braille Magazine which has been distributed free to all blind boys and girls.[2] The various local clubs have sponsored the Boy Scout troops in many of the schools. In addition, they have held annual parties, picnics, and entertainments for blind children. They have provided money for medical attention to many needy cases.[3]

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1. Driggs, Frank M. "Advantages of the Affiliation and Co-operation of Schools for the Blind with Other Organizations." American Association of Instructors of the Blind. Proceedings of the Twenty-Sixth Biennial Convention Held at Austin, Texas, June 27 to 30, 1922, p. 59.

2. Hill, H. A. "The Work of the Lions Clubs for the Blind," American Association of Instructors of the Blind. Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 515.

3. Ibid., p. 516.

In short, their work has been a response to meet the needs of the blind to whom they have given invaluable service.

The Council of Jewish Women through its eighty sections in all parts of the country has been making vast contributions to the educational and recreational life of the blind.[1]

There is a long list of other organizations which has rendered effective and vital service to the blind, for example, the Knights of the Round Table, Knight of Pythias, Rotary Club, and other service clubs, various church denominations, civic organizations, etc. In each case the service has been of tremendous value to the social life and development of the blind.

To many individuals great credit should be given for their intelligent assistance and friendly interest. They have served the blind boys and girls best when they have taken them out as individuals to their homes, to public entertainments, for automobile rides, etc. and brought about normal relationships between themselves and those without sight. These opportunities have meant social emancipation for blind boys and girls.

Mrs. Eleanor Wilson summarized the situation confronting the schools in these words:

> Perhaps our greatest problem is to make the school life real. So much in the residential school life must be forced and artificial, and the child somehow knows it is not real. It is truly difficult I find to keep the life from being empty and negative. The only way I can see to vitalize the residential school life is by

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[1] Silberschmidt, Mrs. Oscar. "Council of Jewish Women." Proceedings of the Thirteenth Biennial Convention of the American Association of Workers for the Blind, Held at Lake Wawasee, Indiana, 1929, pp. 60-61.

> infusion of interests and experiences from outside. Contact with others is always a great motivating power.[1]

4. Services Performed by the Students

Blind children have been naturally more inactive than sighted children caused by the lack of the stimulus of vision and the necessary expenditure of extra energy and effort required for physical activity. As a consequence, it has been one of the most important duties of the schools to develop in their children body coordination so that ease and grace of movement might result. Many opportunities for accomplishing simple tasks have had to be afforded blind boys and girls. In the residential schools numerous opportunities have presented themselves, especially of a practical nature which have had a double value. For instance, the older students have been required to make their beds, clean their rooms, and where conditions have been favorable, they have waited on the table, set and cleared the table, washed and wiped dishes, etc.[2] The cottage system

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1. Wilson, Mrs. Eleanor A. "Discipline and the Social Program in Residential Schools." American Association of Instructors of the Blind, Proceedings of the Thirtieth Biennial Convention Held at Vancouver, Washington, June 23-27, 1930, p. 555.

2. Report of the Tennessee School for the Blind, Sessions 1927-1929, p. 18.

   The Iowa School for the Blind, Vinton, Iowa, 1929-1930, p. 20.

   State School for the Blind and the Deaf, Raleigh, North Carolina, 1924-1926. Raleigh: Edwards and Broughton Company, State Printers, 1926, p. 53.

   Twenty-Third Biennial Report of the Kansas School for the Blind, Kansas City, Kansas, For the Two Years Ending June 30, 1922. Topeka: B. P. Walker, 1922, p. 13.

has been particularly advantageous for offering this kind of practical training.[1]

The feeling of independence and self-confidence that blind children have derived from performing the ordinary household duties have made them worth while regardless even of other values. They have been a means of self-expression which was natural, normal, and constructive. These services rendered by the students tended to make them feel that they were integral, useful members of their environment and they further helped to preserve a more normal, homelike atmosphere in the institution.

Many blind students have returned to their homes after completing the work of the schools and have been able to assist about their own homes. As many of them have been debarred by prohibitive conditions from active vocational pursuits, this ability acquired to make themselves useful in the home has been particularly worth while to them.

5. Daily Schedules

The daily programs of students in residential schools for the blind have indicated that their time has been fully occupied

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[1] Biennial Report, Sixty-Fourth and Sixty-Fifth Annual Reports of the Board of Directors of the Maryland School for the Blind, Overlea, Maryland, October 1, 1926-September 30, 1928, Published by the Corporation, January, 1929, p. 54.

Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley, California: Department of Printing, California School for the Deaf, p. 28.

Perkins Institution and Massachusetts School for the Blind, Ninety-Second Annual Report of the Trustees, 1923. Boston: Wright and Potter Co., 1924, p. 19.

and well distributed with reference to work, rest, and recreation.

The two following schedules are referred to in order to show the general arrangement of time distribution.

A.

6:20	Rising bell
7:00- 7:30	Breakfast
7:30- 7:45	Bed making and preparing for school
7:45- 8:00	Walk in cloister and grounds
8:00- 8:25	Study hour under supervision of teacher
8:30- 8:45	Prayers in auditorium
8:45- 9:00	Current events read from daily newspaper
9:00- 9:50	Classes
9:50-10:00	Recess
10:00-10:50	Classes
10:50-11:00	Recess
11:00-11:50	Classes
11:50-11:55	Recess
11:55-12:20	Classes
12:30- 1:00	Dinner
1:00- 1:40	Free Time
1:40- 2:10	Chorus in Auditorium
2:10- 3:00	Classes
3:00- 3:10	Recess
3:10- 4:00	Classes
4:00- 4:10	Recess
4:10- 5:00	Classes
5:00- 6:00	Free Time
6:00- 6:30	Supper
7:00	Bedtime for younger boys and girls
7:00- 8:20	Study hour under supervision of teacher
8:30- 9:00	Reading to assembled classes by teacher
9:00	Bedtime for intermediate boys and girls
9:45	Bedtime for older boys and girls

The program for Saturday was the same as other week days until the dinner hour; after that the children were free to receive visitors. To a great extent Sunday was a free day; there was a teacher on duty, and children were required to attend their various places of worship. The rising bell and

the breakfast bell rang thirty minutes later than on other mornings of the week.[1]

B.

6:00	Rising bell.
7:00	Breakfast.
8:00- 8:20	Religious exercises.
8:20- 9:00	Literary work, Piano, Voice, Piano tuning, Physical Training.
9:00- 9:40	Literary work, Piano, Voice, Violin, Typewriting, Piano tuning, Corrective work.
9:40- 9:50	Recess.
9:50-10:30	Literary work, Piano, P. S. Music, Violin, Typewriting, Piano tuning, Physical Training.
10:30-11:10	Literary work, Piano, P. S. Music, Violin, Typewriting, Piano tuning, Physical Training.
11:10-11:20	Recess.
11:20-12:00	Literary work, Piano, P. S. Music, Violin, Typewriting, Piano tuning, Physical Training.
12:00- 1:00	Noon Recess.
1:00- 1:40	Literary work, Piano, Voice, Violin, Typewriting, Piano tuning, Sewing, Fancy work, Shop work,
1:40- 2:20	Literary work, Piano, Voice, Violin, Typewriting Piano tuning, Sewing, Fancy work, Shop work, Physical Training.
2:20- 3:00	Chorus, Sewing, Shop work, Practice work, Physical Training.
3:00- 4:00	Sewing, Fancy work, Shop work, Orchestra, Practice work.
4:00- 5:00	Sewing, Fancy work, Shop work, Practice work.
5:00- 6:00	Practice work.
6:00	Supper.
7:00- 9:00	Study Period
9:00- 9:15	Recess.
9:30	Quiet bell.[2]

The program of studies in schools for the blind has embraced longer hours than in the public schools. The time of the blind students has been more fully and completely occupied than is usual in the schools for the sighted. The question arises concerning the advisability of too much organization of

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1. Ninety-Eighth Annual Report of the Managers of the Pennsylvania Institution for the Instruction of the Blind, 1930, p. 73.

2. State School for the Blind and the Deaf, Raleigh, North Carolina, 1928-1930, p. 23.

recreational activity in schools for the visually handicapped. The tendency in most of these schools has been to plan too much rather than too little the leisure time of the students, a condition which has allowed inadequate opportunity for pupils to learn to use their own leisure time profitably. This problem has become a matter of concern to a number of administrators in schools for the blind who have realized that a reorganization of the program of studies within their schools is necessary to alleviate this condition.

II. Methods

Schools for the blind as a whole have been slow in adopting new, experimental methods in high school work, but definite steps in this direction have been taken in the elementary grades particularly by the Experimental School of Department of Special Studies under the auspices of Perkins Institution and Massachusetts School for the Blind and the American Foundation for the Blind.[1] Only sporadic attempts at new methods in the high school departments have been reported here and there among the schools.[2] Several of the schools have endeavored to individualize instruction by the use of the Dalton plan particularly in the case of mathematics and they reported the prospects in the use of this

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[1] Perkins Institution and Massachusetts School for the Blind, Ninety-Eighth Annual Report of the Trustees, 1929, Boston, Wright and Potter Printing Co., pp. 26-29.

[2] Fourth Biennial Report of the California School for the Blind, For the Period Ending June 30, 1930. Berkeley, California; Department of Printing, California School for the Deaf, p. 16.

plan rather than definite results.[1]

The lecture and textbook methods seemed to predominate in these schools. In so far as they were used exclusively the work of the school has been characterized as abstract and unreal. Without recourse to the project and experimental methods, socialized recitations, directed study, and the organization of materials according to the various unit plans the modern spirit and aims in education have been lost. There is need for direct correlation between subjects and between subjects and group activities. The old method of supervised study is no adequate substitute for the new method of directed study, but still there is little evidence that schools for the blind have grasped the educational possibilities which directed study offers.

1. Provisions for Individual Differences

The relatively small class groups in the residential schools for the blind have furnished abundant opportunities for the recognition of individual differences and the use of individual instruction. The desideratum in all education is to develop every pupil to his maximum potentiality in harmony with what is

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[1] Ibid., p. 17.

Ninety-Fourth Annual Report of the Managers of the Pennsylvania Institution for the Instruction of the Blind, 1926, p. 21.

Thirty-Sixth Biennial Report of the Missouri School for the Blind to the Fifty-Fifth General Assembly, January 1, 1929, p. 15.

best for the individual and for society. Consulting the various school reports and examining the papers presented by superintendents of schools for the blind at the meetings of the American Association of Instructors of the Blind it is readily seen how this responsibility has been sincerely assumed by educators of the blind. Their solicitation and eagerness to perform their duty to their charges have made for a thoroughness and completeness of teaching procedures. Blind pupils have been for the most part submitted to intensive training so that they have emerged well grounded in the fundamentals, with well stocked memories, and a capacity for intellectual discrimination. Whether or not their capacity for social responsibility and intercourse has been adequately developed is refragable.

The small number of high school students in these schools has allowed each teacher to diagnose the weaknesses and abilities of her students and to personally aid in correcting the former and giving direction to the latter. As most of this diagnosis has been determined by teacher judgment rather than by scientific methods there were bound to be some faulty estimates and futile efforts. However, in so far as the teachers' judgments have been correct and have been attended by effective methods genuine results have materialized.

Although many of the subjects lend themselves to individual instruction, there are others that are best pursued by group participation. A modicum of wholesome rivalry is imperative both for motivating learning and socialization. As R. S. French says:

> It cannot be said too emphatically that the class groups of the blind must for most purposes be very small and in some cases, particularly in scientific demonstrations, individual work is imperative. In such work as debate, literary study, history and economics, larger class groups are desirable, however, and the dread of the "lock step" need not drive instructors of the blind into the equally dangerous overindividualizing of studies.[1]

Several of the schools reported that they were striving to observe and to deal constructively with the individual differences of their students.[2] This is a commendable practice and one worthy of consideration by the other schools. In justice to the schools that have been giving attention to this vital procedure, especially those schools mentioned in an earlier chapter which have been making use of mental testing, it must be said that this practice has been undoubtedly more wide-spread in schools for the blind than one is able to estimate.

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1. French, Richard S. *op. cit.*, p. 279.

2. Perkins Institution and Massachusetts School for the Blind, One Hundredth *Annual Report* of the Trustees, 1931, p. 40.

   Sixty-Second *Annual Report* of the Board of Visitors and Superintendent of the New York State School for the Blind, Batavia, For the Year 1929-1930, Albany: J. B. Lyon Company, 1930, p. 24.

   Seventy-Sixth *Annual Report* of the South Carolina School for the Deaf and Blind, Cedar Spring, 1924, p. 13.

   Fourth *Biennial Report* of the California School for the Blind, For the Period Ending June 30, 1930, Berkeley, California: Department of Printing, California School for the Deaf, pp. 16-17.

Vocational Guidance.

Schools for the blind have spent a great deal of effort, money, and time preparing their students for postschool life and yet at the crucial moment when these young people especially needed experienced assistance and advice, they have been left to shift for themselves and to take their chances and make adjustments as best they could. This inconsistency has been felt by school administrators for a long period of time, but the expense which a definite system of vocational guidance demands has prohibited such measures. Principals and teachers have often of their own volition set emergencies and helped students to adjust themselves to occupational life, but not until specially trained counselors equipped to handle this important task have become a part of each school's staff, can anything like satisfactory results be expected.

Vocational counselors are found to be indispensable in progressive public schools and it seems a legitimate argument that in schools for the blind the need for their expert services is even greater. The discrepancy between blind and sighted children is sufficient to warrant a larger amount of guidance and direction for handicapped children.[1]

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1. Wilber, Louise. "Vocations of the Visually Handicapped: a Study of the Need of Vocational Guidance in Residential Schools for the Blind." Thesis (Doctor of Education), University of California, May, 1931, p. 319.

Vocational guidance involves the three phases of guidance, training, and placement which must be correlated. When the day arrives that schools for the blind can assume the responsibility of vocational guidance from the standpoint of these threefold aspects, blind children will be given the opportunities to make their lives economically independent and useful.

2. Incentives

There are several reasons why incentives as devices for stimulating scholarship have not been as effective in schools for the blind as in public schools. In the first place, as has been previously noted, schools for the blind have had comparatively small enrollments and in the small classes the opportunity for competition has been greatly diminished. In the second place, blind students by the time they have reached the high school grades have developed ideals, attitudes, and tastes which in themselves have accelerated the learning process. In the third place, the teaching that has been taking place in schools for the blind has been intensive, even if somewhat restrictive in its methods. However, where incentives have been recognized as supplementary to the students' inherent interest in learning and where these devices have actually contributed to the improvement of scholarship, they have had a place in the educative program.

The most common forms of incentives found in schools for the blind were medals, prizes, and special privileges awarded to

students for proficiency in scholarship, conduct and industry, and honor rolls of names of pupils who were entitled to special consideration on the basis of scholarship.

The procedure of granting these artificial incentives in schools of the blind was by no means common to all of these schools. No definite scheme has been persistently followed over a long span of time in any one school and where the practice has existed, its execution seemed to be a matter of concern to the individual schools.

A search through the school reports has revealed the following instances of the uses of incentives.

The Kentucky School for the Blind has given gold, silver, and bronze medals for neatness, punctuality, deportment and effort.[1]

The Pennsylvania Institution for the Education of the Blind has awarded several special prizes at the Commencement exercises. They have awarded prizes for scholarship, a memorial prize in music, a typewriter as a typewriting prize; and prizes for patience, assiduity, and sustained effort in the Industrial Department.[2]

The Western Pennsylvania School for the Blind has awarded gold medals for Honor Roll, athletics, scholarship and

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1. Report of the Kentucky School for the Blind at Louisville, Kentucky, For the Year Ending, June 30, 1928, p. 30.

2. See the Annual Reports of the Pennsylvania Institution for the Instruction of the Blind for the years: 1921, p. 61; 1922, p. 56; 1923, p. 77; 1924, p. 65; 1925, p. 61; 1927, pp. 58; 71-72.

deportment; silver medals for athletics; and prizes for athletics.[1]

Several of the typewriting companies have awarded medals to blind children for special efficiency in typewriting as a result of tests given in the schools in compliance with the rules set by the companies.[2]

The use of the honor roll as an incentive has been effectively used in the South Carolina School for the Deaf and Blind[3] and the Western Pennsylvania School for the Blind.[4]

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1. Western Pennsylvania Institution for the Blind, Pittsburgh, Pennsylvania, Thirty-Fourth Annual Report, 1921, p. 41.

2. Idaho State School for the Deaf and the Blind, Tenth Biennial Report, 1925-1926, Printed by the Pupils, Idaho School for the Deaf and Blind, Gooding, p. 18.

   Fifty-Sixth Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, For the Year 1923-1924. Albany: J. B. Lyon Company, 1925, p. 11.

   Fifty-Seventh Annual Report of the Board of Managers and Superintendent of the New York State School for the Blind, Batavia, For the Year 1924-1925. Albany: J. B. Lyon Company, 1926, p. 11.

   Western Pennsylvania School for the Blind, Pittsburgh, Pennsylvania, Forty-First Annual Report, 1928, p. 25.

   Biennial Report of the Connecticut Institute for the Blind, For the Fiscal Year Ending June 30, 1925 and the Fiscal Year Ending June 30, 1926, Hartford, 1927, p. 7.

3. Seventy-Sixth Annual Report of the South Carolina School for the Deaf and Blind, Cedar Spring, 1924, p. 8.

4. See the Annual Reports of the Western Pennsylvania School for the Blind for the years: 1923, p. 21; 1924, p. 25; 1926, p. 21.

Another device for raising scholarship and promoting better deportment and personal habits has been a reward in the nature of monthly parties, or socials for students who have kept themselves clear of demerits.[1]

The demerit and other negative systems have lost caste in the modern schools and the present tendency is to emphasize only the positive aspect of incentives. Just as the public schools are beginning to doubt the value of artificial incentives and are employing other means to accomplish motivation in learning activities, so the scarcity of data on this subject contained in the reports of the schools for the blind, seems to indicate that devices planned to stimulate educational improvement have not been extensively used in these institutions or their importance has not appeared sufficient to warrant stress.

III. Summary

In summary of the practices and procedures in relation to curricula and methods in secondary schools for the blind, it has been found that the training of blind children has been characterized as intensive rather than extensive. Blind girls and boys of normal ability have been found to have left schools for the blind with a thorough training in the literary subjects and often with either a technical skill in music or in vocational subjects, sometimes in both, which has testified to

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[1] Seventy-Fifth Annual Report of the South Carolina School for the Deaf and Blind, Cedar Spring, 1923, p. 7.

the fundamental and sound instruction they have received. The physical training has not been as adequate and provocative of results as the training in the other subjects, although some allowance must be made for the subnormal physical condition of many blind children which has had to be dealt with continually.

These schools did not appear to have the varied curricula to be found in the public schools, partly because the schools were small and partly because their overhead expenses were proportionally great. In the given curricula of the schools there were found to exist many constants, few variables, and fewer electives, particularly with reference to the academic subjects. The electives were mainly confined to the music and industrial curricula. The narrowly prescribed program of subject matter that existed in most of the schools did not cater to individual differences.

The lack of a large choice of textbook material has retarded work in the academic subjects, but it is encouraging to note that a greater variety of textbooks for high school work has been appearing each year and there is promise of still a larger assortment of modern standard books in the future.

An increasing interest has been evidenced in extra-curricular activities in these schools, and they have been sufficiently varied in most of the schools to meet the diversified interests of the student population. It is apparent that the management of the schools has not learned to interrelate these activities

with the other branches of the program of studies, the consummation of which will mean greater efficiency and greater achievement.

Schools for the blind have not yet found sufficiently adequate means of socializing their students. The residential schools due to their very nature must make positive attempts to overbalance the suppressing, narrowing effects inherent in institutional life. Less stress needs to be laid on traditional textbook and lecture methods of learning and added emphasis need to be put on methods and means that develop personality and individuality by real interests, real activities, and real experiences.

Guidance in its various aspects needs much more attention in the schools. Vocational guidance, where it has existed, has been in its inceptive stage, and intelligent knowledge and application of its principles will enrich the opportunities for visually handicapped children.

G. F. Oliphant once very cleverly remarked about the condition that prevailed in these schools thus: "Too often the walls of the institution not only shut the pupils in, but shut life out." Then he sagely added, "Our business is to help our pupils to live their lives, rather than to help them repeat our lives."

Chapter Six

Summary, Conclusions, and Recommendations

I. Summary

Since detailed summaries will be found at the end of major divisions in the study as well as at the close of each chapter, the findings of this investigation as a whole are here presented in the form of general summarized statements. These findings will be of interest to those who desire only a telescopic view of the practices and procedures in these special schools, but for a more comprehensive and detailed knowledge of the subject, reference to the body of the investigation is suggested. It must be kept in mind that the facts as revealed are concerned with the period 1921-1931.

The Findings:

Every State was found to have made provision by 1931 for the education of its blind children, either by maintaining a residential school for the blind, as in the case of forty States, or by paying for their education in residential schools in other States or by sending them to local public schools, as eight States have done.

The field of the education of the blind has been fortunate in engaging the services of a comparatively large number of distinguished educators who have made valuable contributions to this work.

Graduates of schools for the blind were found in many cases to have made outstanding successes in the various fields of activity which they have entered.

The education of the blind has been greatly facilitated and enhanced by four national auxiliary agencies: the American Foundation for the Blind, the American Printing House for the Blind, the American Association of Instructors of the Blind, and the American Association of Workers for the Blind.

Schools for the blind had, by 1931, almost universally substituted the name "school" for such terms as "asylum," "institution," and "institute" which appeared in the original titles.

Progressive schools for the blind were endeavoring to function as organic institutions. In them provision has been made in order that the purpose of education for more complete living might be realized. Emphasis has been placed on the development of the capabilities of the individual child. A significant number of schools for the blind have remained static, or at best dynamic institutions, and during the period under consideration have held as their two chief purposes the preparation of the child for earning

a living and the preparation of the child for future citizenship.

Twenty-six schools for the blind were found to have been established as independent schools for blind children; sixteen schools were originally created to accommodate both deaf and blind children; nine schools remained dual schools.

The majority of senior high school departments in schools for the blind were established according to the traditional form of organization and have continued to maintain this form.

Relatively few schools for the blind created junior high school departments in the decade considered. Where they have been established, their forms of organization have been similar to those of the public junior high schools. The reasons for adopting junior high school departments in schools for the blind have been synonymous with those given for the establishment of public junior high schools.

Few scientifically conducted experiments were found to have been made with reference to the physiology and psychology of the blind. The bulk of the studies that have been made have resulted in generalizations characterized as to method by introspection and observation based on isolated cases or, at least, on too small a number of cases to render the conclusions truly conclusive. Unreliable methods of collecting the data add to the unreliability of such results as were obtained.

Attention has been increasingly directed toward prevention of blindness in children. By means of laws, regulations, and education ophthalmia neonatorum as a cause of blindness has been greatly reduced. Too large a number of cases of blindness in children continued to be due to congenital causes of blindness and to accidents.

The physical welfare of the students has been receiving attention in secondary schools for the blind particularly from the medical and physical education departments of the schools.

Although scientific experiments have been scarce, considerable attention was directed during the decade toward various aspects of the psychology of the blind in an effort to compare the blind with the sighted and to discover any traits unique to the blind.

There was evident a high degree of uniformity among residential schools for the blind with respect to statutory provisions, sources of revenue, and officers in the schools.

Thirty-eight States had, by 1931, enacted compulsory education laws referable to blind children and slightly more than one-half of the States had designated a specific compulsory attendance age period for blind children.

The problem of contacting all the blind children of school age within each State had not been satisfactorily solved by the end of the period treated.

Eighteen States had made, by 1931, annual appropriations

to furnish readers to blind students attending higher institutions of learning.

Only five of the forty-two residential schools for the blind were found to be not entirely State supported schools. They derived their support partially from the State and partially from endowment funds, tuition, and private contributions. There was no uniformity apparent in the amount of the annual per capita allowance granted to the schools.

The management of schools for the blind has been under the direction of boards, with a variety of titles, but a decided tendency during the period to place these institutions under the State Board or Department of Education was noticeable. The median size of the boards was found to be five members; their median term of office, four years; and the majority of the members of the boards were appointed by the governors of the respective States.

Superintendents of schools for the blind for the period 1921-1931 were found to have served in that capacity from one to sixty-one years, with a fairly even distribution between these extremes.

Each school for the blind maintained a comparable staff of workers to conduct the work of the various departments.

The location of schools for the blind as well as the size of the grounds varied. Schools were located in cities, suburbs, and in rural sections. Their median number of acres was found to be twenty.

The older school buildings were of the congregate type, which the study revealed are being replaced by the cottage or modified cottage plan.

Although the equipment differed in amount and kind in the various schools, certain standard equipment was found to be a part of every school.

Revised Braille had become, by 1931, the standard type of embossed print in all the schools, replacing New York Point and American Braille.

The study makes it apparent that the blind reading public have had at their service school, State, and city libraries that have furnished embossed books on request. The libraries have been growing constantly and the range of subject matter has been expanding continually.

A large majority of teachers in secondary schools for the blind were found to be sighted; women teachers predominating in every department.

The preparation of a large number of teachers in secondary schools for the blind was revealed as meagre. A large proportion of them, even by 1931, held no academic degrees, but as a whole they did hold credentials which entitled them to teach in their respective departments. Their teaching experience was found to have been confined chiefly to senior high schools and the lower grades.

A significent percentage of these teachers showed interest in professional advancement as evidenced by

additional study, but showed little experience in foreign travel.

It was found that practically a half of the teachers resided at the schools for the blind during the years 1921 and 1931.

Enrollments in secondary schools for the blind during the years studied were small; likewise, the class size and the number of graduates were correspondingly small.

Although various degrees of blindness existed in secondary schools for the blind, approximately one-half of the students were totally blind, and the other half had partial vision.

Most of the students in the junior and senior high school departments in schools for the blind were revealed as considerably older than students in the public schools in the corresponding grades.

The length of class periods in the secondary departments in schools for the blind was found to be equivalent to that in the public schools. The summer vacation in the former institutions was longer, but there were fewer holidays observed throughout the year.

Such practices as: examinations, units and credits, certification, schools accredited to the university, and auxiliary school agencies were found represented in a number of secondary schools for the blind, but no one was

common to all of the schools.

A program of tests and measurements was initiated during the period and carried on in at least fifty per cent of the schools with favorable results.

Programs of studies in secondary schools for the blind included four departments; namely, literary, music, industrial, and physical education.

The curricular offerings of the literary departments were shown to be limited in variety. Literature, composition, history, and algebra received the greatest emphasis and the physical sciences received the least emphasis.

The textbooks used in English literature classes in secondary schools for the blind were found to be comparable to those used in public high schools in the same grades.

Embossed textbook material has been decidedly limited in variety and few current textbooks had appeared in Braille by 1931.

The evidence showed that in secondary schools for the blind the music departments were offering adequate, thoroughgoing training; the work of the industrial departments was as a whole organized in accordance with definite objectives; and the physical education programs were varied in extent and methods, but often lacked specific aims.

Throughout the period studied religious, moral, and character training received definite attention in all the residential schools for the blind and a marked uniformity

in practices was discovered in each school.

All of the secondary schools for the blind had, by 1931, organized a social program, but the extent and type of activities varied among the schools.

For practical purposes and for its socializing possibilities students in secondary schools for the blind have been expected to render certain services of a menial nature.

Every high school student in these special schools has been required to follow a very completely scheduled daily program.

Isolated attempts were made during these years in secondary schools for the blind to use new, experimental methods in pursuance of the school work. However, the lecture and textbook methods continued to the end of the period to be the most universally used in these schools.

Some attention had been directed to the problem of individual differences in schools for the blind, but little conclusive evidence had appeared.

Anything approaching a definitely organized guidance program was found lacking in secondary schools for the blind. The need for vocational guidance in particular has been felt, but it has not been met to any appreciable extent.

Artificial incentives had apparently found little place in secondary schools for the blind as this practice was seldom mentioned in the school reports.

II. Conclusions

It must be admitted at the outset that much of the material of this investigation was obtained from school reports and answers to questionnaires and in both cases a small number of schools was not represented. However, it seems that the data were complete enough to justify in general the following inferences:

There is evident a modern and progressive spirit directing secondary education in residential schools for the blind in the United States. The work of these schools is recognized by law as part and parcel of the duty of the several States to protect all children in their right to an education. To that end these secondary schools for the blind are being organized, administered, and supported as organic parts of our State school systems; the practices and procedures within these schools are comparable to those prevailing in the schools for the sighted; by various devices, such as the cottage system, the use of the name "school," and others, the children in these institutions are recognized as individuals worthy and capable of education for an abundant and rich life; methods of instruction have had to be adapted to the characteristics of these children but no more so than to the nature of other atypical groups within State school systems.

The attempts of these schools to execute these ideals and to carry on an education radiating from the pupil in keeping with his nature are hampered by a serious lack of reliable information as to what is the nature of blind children, as to how they differ in their learning process from sighted children, as to what extent the congenitally blind differ from the adventitious blind, and a host of other comparable problems. Definite knowledge of the physiological and mental life of visually defective children derived from scientifically conducted experiments in imperative in order to give effective direction to instruction in schools for the blind. The possibilities for experimental work of this nature are sufficiently abundant to attract the interest of scientific workers whose contributions are keenly anticipated.

The financial problems of these schools are serious and difficult. The kind and amount of equipment and supplies in both original cost and replacement present difficulties peculiar to these schools; the necessity for small group and for individual instruction raises materially the pupil cost; the concept of these schools as educational in purpose dealing with the whole child is an expensive concept to put into practice.

Residential schools for the blind have been fortunate in the large number of outstanding educators who have entered this field of activity to which they have contributed freely

of their talents and spirit to place these schools in the position that they enjoy at present. Their efforts have been abetted and paralleled, in many instances, by four national auxiliary agencies which have had an important influence in shaping policies and in providing material assistance to the process of the education of the blind. Thus far many secondary schools for the blind have not given serious attention to the recognition of teaching in these special schools as a profession attested by the noticeable laxity in requirements regarding their teachers with respect to such qualifications as: preparation, degrees, and experience. Furthermore, a large number of these teachers are required to reside at the schools in order that they may assume the responsibility of the social life and development of the students, a practice that tends to place a custodial duty on these teachers who should enjoy the same privileges of extra school contacts as do the teachers in the public secondary schools. The special courses dealing with the education of the blind that are being conducted in several educational institutions offer opportunities so valuable to teachers of blind children that they should not be confined to a limited number of centers so remote that they preclude an appreciable number of teachers from attending them.

Secondary schools for the blind appear to be slow in accepting innovations for their administrative procedures; for instance, the practice of giving formal examinations of

the essay type still prevails, and there is little evidence to show that the new-type objective examinations have been given any consideration. A few schools have adopted the practice of sending advanced high school students to public high schools; others have successfully conducted summer school sessions; and even a night school was attempted. However, these practices have been sporadic and do not characterize secondary schools for the blind as a whole. A more universal interest has been manifested in tests and measurements than in the other administrative aids considered in this study and the results of the testing programs thus far pursued indicate an extension of this practice.

This investigation has revealed that programs of study in secondary schools for the blind are too much influenced by tradition, and methods are too frequently used that aim at regimentation rather than at individual development of the students. Thoroughness of training, which is intensive rather than extensive, is emphasized generally in all of the departments of these schools. Music departments in secondary schools for the blind are accomplishing significant results, while the physical education departments are still searching for adequate objectives to give direction to their work.

Residential schools for the blind are alert to the possibilities inherent in extra curricular activities for their students. Blind boys and girls need vast opportunities

for social development and unfortunately, the very nature of the residential institutions tends to suppress and retard the natural development of the students, a condition which has not been fully provided for by practices and procedures in all of these schools. The opportunities for socialization offered by extra curricular activities make a special appeal to visually handicapped children and these schools have not always discovered means whereby they may integrate these extra curricular activities with the formal side of the programs of studies. The small classes and comparatively large instructional staffs make possible the recognition and treatment of individual differences. There is evident, nevertheless, a lack of organized guidance programs in these schools which in themselves would offer more complete opportunities by which not only the vocational but also the educational and social needs of the individual students can be met.

III. Recommendations

From the findings that are the result of this study there are suggested certain changes in practices and procedures as well as a few innovations that may have specific value for the progressive improvement of these institutions:

It will be to the advantage of all residential schools for the blind to be placed directly under the State Department of Education.

Schools for the blind should reorganize their systems in order that they may become functional in nature and they should place increased emphasis on the development of the whole child considering him both as an individual and as a member of society.

Schools for the blind should constantly analyze their purposes and objectives and not allow standardization to serve as a substitute for progressive development.

Independent schools for the blind should replace those of the dual type.

In schools where there are adequate facilities, the junior high school roganization should be adopted, or at least be given a fair trial.

Introspective, unreliable methods of experimentation should be replaced by procedures which are thoroughly scientific.

Concerted action should be directed toward the reduction of the various causes of blindness among children comparable to that taken with regard to ophthalmia neonatorum in an effort to bring about similar successful results.

Every school should stress the physical welfare and development of its students through every department of its system.

In order to effect improvement in the instruction of blind children scientific experiments should be conducted

to discover particularly:

1. Whether or not the partially blind should be given identical instruction with the totally blind.

2. Whether there exists a difference between the achievement of the congenital and adventitious blind and if so, its nature and degree.

3. The absolute threshold of perception in blind students.

4. The nature of space perception in the blind.

5. The memory possibilities in blind children.

6. The extent of the dream life in blind children.

7. The part that synaesthesia plays as an educational agency in the life of blind boys and girls.

Schools for the blind should make it possible for workers to carry on scientific research in their schools which will increase knowledge pertinent to the problems concerning the education of the blind.

Concerted efforts should be directed toward enrolling all the blind children in each State in schools for the blind who are not receiving the advantages offered by educational institutions. Organizations of the various kinds and all public officials should be specifically informed about the residential schools for the blind and their aid should be requested in this matter. This solicitation should occur at regular intervals according to a systematic schedule.

Superintendents in schools for the blind should not be merely political appointees, but rather they should be men and women placed in this administrative office who have had professional experience in the field of education and who possess adequate knowledge of the blind.

New school plants in the future should adopt the cottage system, either complete or modified, according to the size of their student population and the resources available.

The equipment in all residential schools for the blind should be of such a nature as to further educational progress as much as possible.

There should be demanded of every teacher in secondary schools for the blind at least the minimum requirements of the public school teachers in their respective States.

The privilege of living away from the confines of the institutions should be granted to the teachers in these schools in order that they may mingle more generally in a different environment whereby they may acquire renewed vigor and broaden their interests with a view to contributing a more wholesome influence to the schools.

Further opportunities for professional preparation and advancement concerning the education of the blind should be afforded to all teachers of visually handicapped children. Regional training centers should be established in order to extend teacher training facilities throughout the country.

Where the plan would be feasible, provision should be made for selected students from the more advanced high school grades to attend local high schools under the direction of the respective residential schools for the blind.

Every residential school for the blind should organize and carry on a testing program under the direction of a competent psychologist.

In addition to the thoroughness of training given to students in secondary schools for the blind there should be an effort directed toward developing in the students a wider and more comprehensive knowledge of life and its activities, particularly in terms of the present day.

The subjects taught in the literary departments should be evaluated according to present needs and standards and traditional subjects that have outlived their original usefulness should be abandoned.

Emphasis should not be placed on work in the industrial departments which has no practical value.

Provision should be made for adequate outdoor recreation for every student in schools for the blind and under the direction of the physical education department every student should participate in some form of daily exercise.

Schools for the blind should continue their interest in extra curricular activities and constantly strive to make these activities definitely function in the lives of the students.

Social training should be emphasized in secondary schools for the blind but social development should always be a natural process that causes the child "to will to do" and should not be superimposed arbitrarily on him.

Every residential school for the blind should bear in mind that its institutionalizing influence must be counteracted and it should encourage every salutary, wholesome influence for its student population.

Traditional methods in secondary schools for the blind which are not in harmony with modern educational objectives should be replaced by newer methods which will contribute more vitally to the lives of the students.

Secondary schools for the blind should recognize and capitalize upon their opportunities for the development of the individual potentialities and capabilities of their students.

Every residential school for the blind should make provision for a definite guidance program within the school, with special emphasis on vocational guidance.

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